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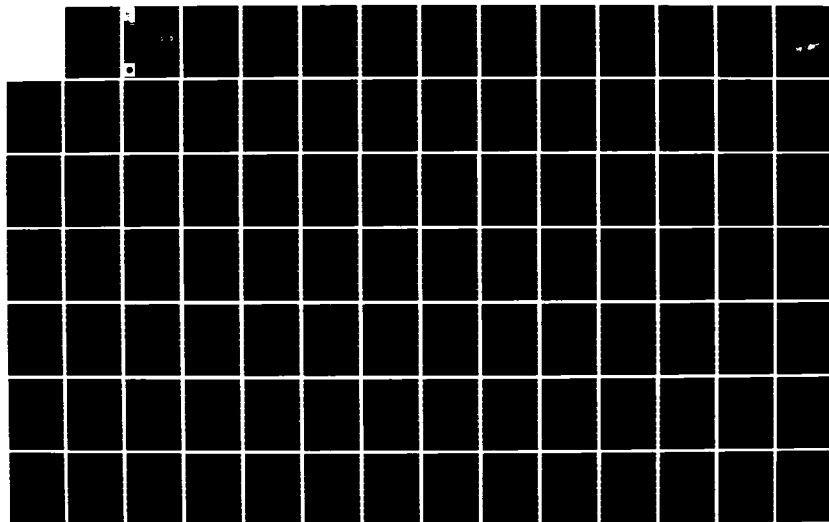
1984 NEARSHORE SURVEYS AND SEDIMENT SAMPLING ASSATEAGUE ISLAND MARYLAND(U) COASTAL ENGINEERING RESEARCH CENTER
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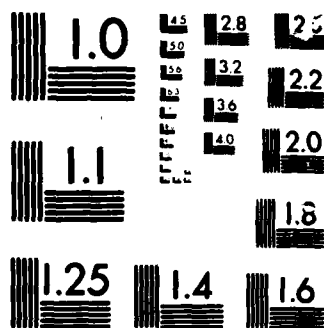
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1984 NEARSHORE SURVEYS AND SEDIMENT SAMPLING, ASSATEAGUE ISLAND, MARYLAND

by

Michael W. Leffler, Ernest R. Smith, Curt Mason

Coastal Engineering Research Center

DEPARTMENT OF THE ARMY
Waterways Experiment Station, Corps of Engineers
PO Box 631, Vicksburg, Mississippi 39180-0631

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April 1986
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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) By collecting cross-island and nearshore profiles and sediment samples, an erosion control study of the northern Assateague Island area was developed. Comparisons were made with the profile data collected in 1965 and 1979. The Field Research Facility's Interactive Survey Reduction Program (Birkemeier 1984) was used to edit, list, and plot the profile data. The 104 sediment samples were analyzed using standard sieve analysis techniques, and listings and plots of the size distributions are given. These plots show large and interesting (Continued)		

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20. ABSTRACT (Continued).

changes which have occurred within the study area. Extensive growth of Ocean City Inlet's ebb tidal delta between 1965 and 1979 is clearly indicated. South of the inlet, the island shows wholesale transgression of the entire profile, while further south the contour remains relatively stable.

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PREFACE

The study described herein was authorized under Work Order No. E8584R048, dated 24 August 1984, by the US Army Engineer District, Baltimore. The work was under the general direction of Mr. Edward Fulford, Baltimore District.

All elements of the study were conducted by the Coastal Engineering Research Center (CERC), US Army Engineer Waterways Experiment Station (WES), under the general direction of Dr. R. W. Whalin, former Chief, CERC. The study was directed by Mr. Curt Mason, Chief, CERC Field Research Facility (FRF), under the supervision of Drs. J. R. Houston, former Chief, Research Division, and W. L. Wood, former Chief, Engineering Development Division. The data collection effort was supervised by Mr. Michael W. Leffler, with assistance provided by Messrs. E. W. Bichner, W. E. Grogg, J. L. Thomas, C. R. Townsend, and C. M. Hanna, FRF. Survey data were reduced and analyzed by Messrs. Leffler, W. A. Birkemeier, and E. R. Smith. Extensive assistance in digitization of survey data and sediment size analyses was provided by Mr. S. Knowles, Ms. M. L. Fields, and Dr. S. M. Kimball, Coastal Processes Branch, Research Division, CERC.

Director of WES was COL Allen F. Grum, USA. Technical Director was Dr. Robert W. Whalin.

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CONVERSION FACTORS, NON-SI TO SI (METRIC) UNITS OF MEASUREMENT

Non-SI units of measurement used in this report can be converted to SI (metric) units as follows:

<u>Multiply</u>	<u>By</u>	<u>To Obtain</u>
feet	0.3048	metres
horsepower (550 foot-pounds (force) per second)	745.6999	watts
miles (US statute)	1.609347	kilometres

1984 NEARSHORE SURVEYS AND SEDIMENT SAMPLING,
ASSATEAGUE ISLAND, MARYLAND

PART I: INTRODUCTION

Background

1. Over the past several decades, the northern end of Assateague Island, Md. (Figure 1), has been migrating landward, resulting in extensive changes to the beach and dune systems. Concerned about the long-term impact of this process, the National Park Service's Assateague Island National Seashore negotiated a cost-reimbursable erosion control study with the US Army Engineer District, Baltimore, for the northern 45,000-ft* area of Assateague Island. The study was to include such topics as shoreline changes, volumetric changes, and a sediment budget.

2. The Baltimore District, seeking an accurate, comprehensive surveying capability, contacted the US Army Engineer Waterways Experiment Station Coastal Engineering Research Center's (CERC's) Field Research Facility (FRF) for assistance in conducting topographic and bathymetric surveys of the area, as well as sediment sampling and analysis. This report provides the data collected by the FRF staff under the terms of the resulting agreement.

Objectives

3. The objectives of the study were to collect cross-island and near-shore profiles and sediment samples to aid in an erosion control study of the northern Assateague Island area. An additional objective which developed during the latter portions of the work was to compare the profile data with those collected in 1965 and 1979.

* A table of factors for converting non-SI units of measurement to SI (metric) units is presented on page 3.

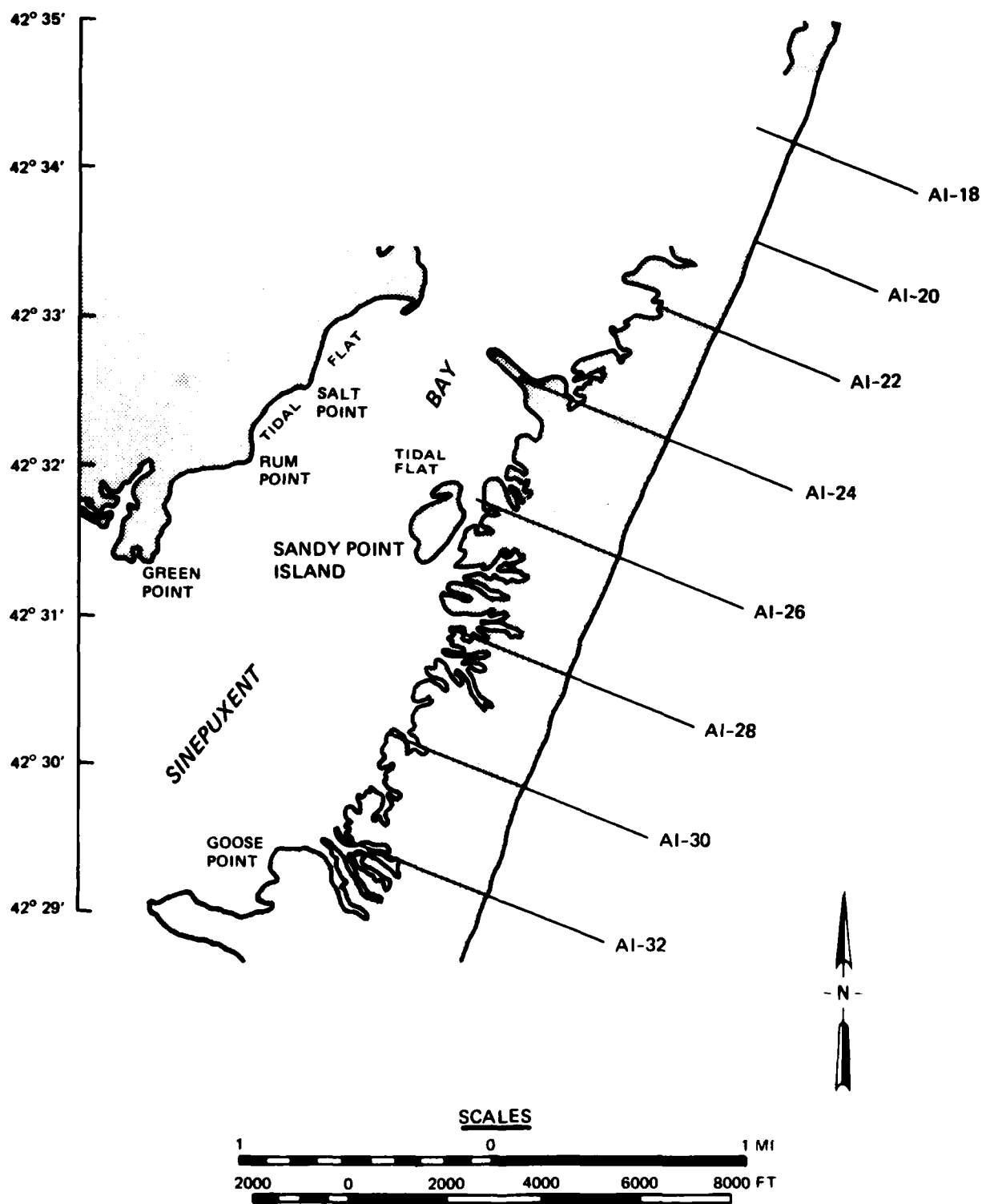


Figure 1. Profile line locations AI-T through AI-32 (Continued)

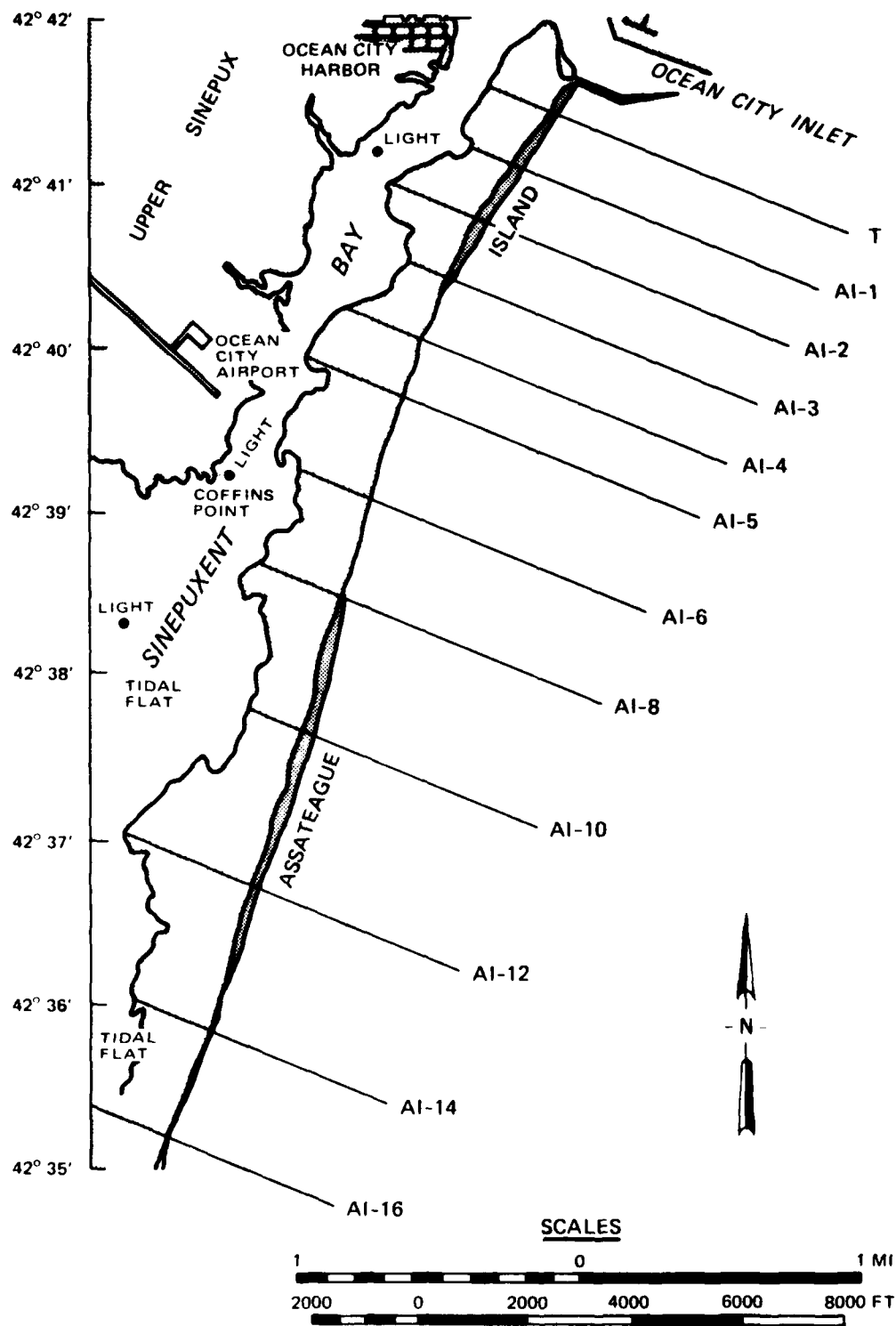


Figure 1. (Concluded)

PART II: DATA COLLECTION

4. Although originally scheduled for the late summer to minimize down-time due to weather conditions, delays in funding precluded initiation of the project until September 1984. As a result, nearshore surveys were conducted during eight days between 26 September and 27 October (with extensive gaps caused by adverse weather), while subaerial portions were conducted as weather and time permitted, beginning on 18 September (see Table 1).

Table 1
Survey Line Information (1984)

Profile Number	Approximate Distance South from North Jetty, ft	Length of Profile Line ft	Date of Survey	
			Onshore	Offshore
T	1,800	8,164	18 Sep	27 Oct
1	3,060	7,994	18 Sep	27 Oct
2	4,325	8,161	18 Sep	26 Sep
3	5,615	7,096	19 Sep	26 Sep
4	6,905	7,002	19 Sep	26 Sep
5	8,125	6,900	19 Sep	4 Oct
6	10,125	5,630	19 Sep	4 Oct
8	12,170	4,676	19 Sep	4 Oct
10	14,889	3,399	19 Sep	4 Oct
12	18,070	5,681	19 Sep	4 Oct
14	21,025	3,410	19 Sep	5 Oct
16	23,345	4,040	26 Sep	5 Oct
18	26,325	4,174	26 Sep	5 Oct
20	28,740	3,960	27 Sep	5 Oct
22	31,870	3,833	27 Sep	5 Oct
24	34,520	4,901	27 Sep	5 Oct
26	37,295	4,941	27 Sep	25 Oct
28	40,095	4,202	3 Oct	25 Oct
30	42,665	4,801	3 Oct	25 Oct
32	45,340	5,265	3 Oct	25 Oct

Surveys

5. The 20 profiles shown in Figure 1, extending from the Sinepuxent Bay shoreline to a water depth of 30 ft National Geodetic Vertical Datum (NGVD) in the Atlantic Ocean, were surveyed using the techniques described below.

Survey equipment

6. The offshore portions of the profiles were obtained using a surveying system which incorporates a Zeiss Elta-2 first-order, self-recording electronic theodolite distance meter in combination with a lightweight portable aluminum sled, with reflecting prisms mounted on the sled's 38-ft mast (Figure 2). The sled was towed using a 16-ft inflatable boat powered by a 35-hp outboard engine. The onshore portion of the survey incorporated the use of the Zeiss and several rod-mounted prisms. Additional equipment included a Zeiss DAC-100 used for reading, erasing, and transferring data from the Zeiss memories, and a Tektronix 4923 tape unit used for data storage.

7. Under most conditions, the vertical and horizontal accuracy of the sled/Zeiss system was within ± 0.1 ft. However, in areas of significant mast tilt (up to 5 deg from vertical), errors of up to 0.12 ft in the vertical and 3 ft in the horizontal did occur. These areas were limited to small areas in the nearshore bar/trough systems.

Survey control

8. Each profile line was defined by two clearly marked iron pipes (orange with 8-ft orange witness posts) that were installed by contractors for the Baltimore District (NAB). A westerly or baseline pipe was installed in the interior portion of the island and a similar pipe was positioned 400 to 900 ft east of the baseline pipe either on the dune or the beach face. "Line-of-sight" was maintained between both pipes. An additional wooden stake was installed by the FRF survey crew as insurance against loss or damage to either of the pipes. On all profile lines the baseline (westerly) pipe was used as the zero onshore/offshore (Y) point with the alongshore coordinate (X) supplied by NAB.

Survey techniques

9. Each profile line was divided into two zones for surveying purposes. The landward portion extended from the Sinepuxent Bay shoreline of Assateague Island to the seaward toe of the dune. The seaward area extended from the toe of the dune to the -30 ft contour in the Atlantic Ocean. Some overlap of the

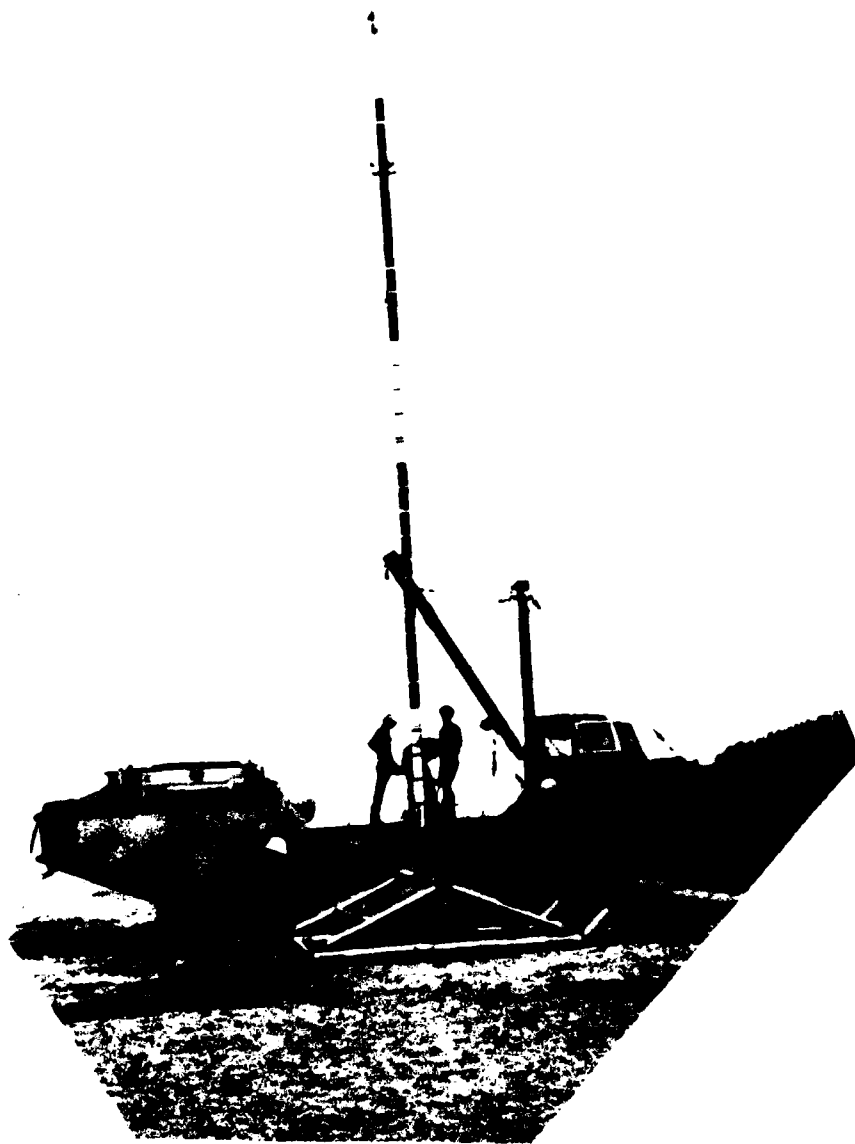


Figure 2. Portable survey sea sled

two zones was maintained as a quality control measure. Surf conditions (the boat and sled required calm conditions) generally dictated which portion of the profile line would be surveyed on any given day.

10. Land survey. The land survey crew included a Zeiss operator and two rodmen. Because the Zeiss is a line-of-sight optic surveying instrument, the reflecting prisms were mounted on rods of varying lengths (3 to 25 ft), keeping the prisms above the vegetation, which varied from marsh grass to pine trees. This resulted in very little damage to the flora on the island, as there was no need to cut sight paths. Points were taken at every significant break in the profile with the rodmen being kept on-line by the Zeiss operator.

11. Ocean survey. The ocean survey team included five members, two on shore (Zeiss operator, rodman/radioman) and three in the inflatable boat (boat operator, tow line tender, and sand sampler/radioman). The surveys were conducted on pairs of profile lines with the sled being towed offshore on one line and onshore on the following line. Points taken close to shore were obtained at each significant break in the profile, while points seaward of the nearshore bar were taken at every 1-ft change in elevation. The boat operator was appraised of the sled's position at each point so course corrections could be made to keep the sled on line. Deviations from the line were frequently kept to within ± 20 ft.

12. Table 1 contains the survey dates and other pertinent information regarding the profile lines.

Sand Samples

13. Grab samples of bottom sediments were obtained along every other profile line beginning with profile line T at approximately the following points:

- a. Bay shoreline.
- b. Dune centerline, toe of dune
- c. Berm
- d. High water line
- e. Low water line
- f. At -6, -12, -18, -24, and -30-ft NGVD contours.

The actual locations and depths of each sample are given on the analysis sheets in Appendix C.

PART III: DATA REDUCTION AND ANALYSIS

1984 Survey Data

14. To ensure that adequate and accurate survey data were collected, data were examined and transferred each evening from the Zeiss solid-state memories to the Tektronix tape unit. Upon the crew's return to the FRF, the data were transferred to the Cybernet mainframe computer at Control Data Corporation. The FRF's Interactive Survey Reduction Program (ISRP) (Birkemeier 1984*) was used to edit, list, and plot the profile data. Appendix A contains the triplet data points for each profile, and Appendix B contains the profile plots.

Sediment Samples

15. The 104 sediment samples were analyzed using standard sieve analysis techniques, and listings and plots of the size distribution are given in Appendix C.

Previous Survey Data

16. To aid the Baltimore District in determining historical changes to the study area, survey data obtained using a boat-mounted Fathometer in 1965 and 1979 along many of the same profiles were also reduced. Boat sheets showing depths plotted in Maryland state plane coordinates were digitized, and the resulting data were converted to ISRP format. Most of these data represented smoothed traces through the original Fathometer data. However, since some of the 1979 profiles had not been previously smoothed, three methods were used to determine an accurate, yet rapid technique for survey data reduction.

17. The first two methods consisted of computer-generated curve fitting techniques. A fifth-order polynomial fitting program from the Statistical Package for the Social Sciences was first attempted but proved unsatisfactory. Next, a variable-order program from the International Mathematical Statistics

* Birkemeier, W. A. 1984 (Nov). "A User's Guide to ISRP: The Interactive Survey Reduction Program," Instruction Report CERC-84-1, US Army Engineer Waterways Experiment Station, Vicksburg, Miss.

Library (IMSL) was applied, and it was found that a third-order polynomial fit portions of the profile well, but that the profile had to be separated into parts and then pieced together after determining the equation of the best fit line for each portion. This method proved tedious and time-consuming for profiles having bar and trough systems. Profiles from 1979 smoothed using this method were AI-T, AI-4, and AI-24.

18. The best method for smoothing irregularly shaped profiles proved to be hand-smoothing through the digitized data, and then redigitizing the curve into an ISRP format. Although this appears to be a time-consuming process, it proved to be more efficient than the trial-and-error IMSL approach. Profiles from 1979 smoothed using the hand-smoothed method were AI-2, AI-8, AI-12, AI-16, and AI-20.

19. Plots showing comparisons of the 1984 profiles with previous years are given in Appendix D. These plots show that large and very interesting changes have occurred within the study area. Extensive growth of Ocean City Inlet's ebb tidal delta between 1965 and 1979 is clearly indicated on Profile AI-T, and this growth apparently continued through 1984, as shown for Profile AI-1. South of the inlet (Profiles AI-8 through AI-24), the island shows wholesale transgression of the entire profile, while further south the 30-ft contour remained relatively stable. These data are undergoing additional analysis (volumetric changes, shoreline changes, etc.) at CERC. The analysis will be published in the near future.

APPENDIX A
PROFILE DATA LISTINGS

Table A1
Profile AI-O(T) Data Listing

LD
LOCAL PROFILE SURVEY DATE TIME POINTS UNITS
AI 0(T) 5 841027 1030 100 FT

	Y	Z	X	OFF LINE
1	-1026.30	1.59	1800.94	.94
2	-1016.86	3.18	1798.37	-1.63
3	-996.50	5.54	1794.92	-5.08
4	-983.73	5.14	1790.51	-9.49
5	-960.79	2.42	1792.42	-7.58
6	-925.34	2.70	1793.12	-6.88
7	-884.00	2.70	1788.73	-11.27
8	-822.13	3.29	1793.26	-6.74
9	-739.14	3.71	1791.15	-8.85
10	-674.69	4.10	1803.74	3.74
11	-671.74	4.08	1808.43	8.43
12	-633.84	4.33	1802.86	2.86
13	-591.01	5.18	1802.89	2.89
14	-507.33	5.53	1795.08	-4.92
15	-473.46	5.73	1793.10	-6.90
16	-441.83	5.50	1791.47	-8.53
17	-405.38	5.63	1801.50	1.50
18	-365.41	5.79	1800.14	.14
19	-326.34	5.66	1810.43	10.43
20	-266.44	5.97	1808.20	8.20
21	-243.81	6.00	1843.62	43.62
22	-228.34	6.37	1811.03	11.03
23	-217.81	6.35	1824.20	24.20
24	-177.50	6.96	1820.52	20.52
25	-152.28	7.86	1816.23	16.23
26	-124.84	6.79	1811.91	11.91
27	-93.79	7.18	1808.35	8.35
28	-73.80	7.66	1805.57	5.57
29	-55.60	8.27	1802.72	2.72
30	-31.53	9.68	1799.73	-.27
31	-9.65	11.62	1799.93	-.05
32	7.32	14.35	1799.93	-.07
33	24.23	12.79	1800.22	.22
34	44.79	11.87	1800.44	.44
35	73.86	13.54	1801.00	1.00
36	95.93	15.14	1802.08	2.08
37	112.11	14.46	1803.00	3.00
38	131.70	13.72	1802.75	2.75
39	145.04	14.82	1802.82	2.82
40	157.50	13.04	1803.37	3.37
41	161.53	12.93	1803.56	3.56
42	167.00	13.13	1800.00	.00
43	180.00	11.76	1801.00	1.00
44	202.00	7.53	1799.00	-1.00
45	234.00	6.83	1799.00	-1.00
46	266.00	6.71	1798.00	-2.00
47	305.00	5.25	1801.00	1.00
48	346.00	3.57	1805.00	5.00
49	394.00	1.16	1801.00	1.00
50	424.00	.53	1806.00	6.00
51	451.00	-.27	1802.00	2.00
52	481.00	-.70	1795.00	-5.00
53	510.00	-1.51	1795.00	-5.00
54	534.00	-2.17	1800.00	.00
55	551.00	-2.71	1802.00	2.00
56	576.00	-3.78	1804.00	4.00
57	599.00	-4.65	1807.00	7.00
58	630.00	-6.14	1807.00	7.00
59	638.00	-6.68	1811.00	11.00
60	719.00	-9.95	1802.00	2.00
61	791.00	-11.62	1804.00	4.00
62	924.00	-13.46	1809.00	9.00
63	966.00	-13.97	1810.00	10.00
64	1102.00	-14.57	1798.00	-2.00
65	1180.00	-14.90	1798.00	-2.00
66	1371.00	-16.11	1808.00	8.00
67	1486.00	-16.78	1801.00	1.00

68	1687.00	-17.59	1800.00	.00
69	1884.00	-17.78	1800.00	.00
70	2173.00	-17.47	1785.00	-15.00
71	2435.00	-17.36	1811.00	11.00
72	2741.00	-17.86	1796.00	-4.00
73	2946.00	-18.06	1800.00	.00
74	3139.70	-18.00	1784.50	-15.50
75	3202.00	-17.69	1789.00	-11.00
76	3406.74	-16.81	1806.11	6.11
77	3417.00	-16.46	1823.00	23.00
78	3662.00	-15.58	1780.14	-19.86
79	3929.83	-14.23	1793.50	-6.50
80	4047.75	-13.88	1789.06	-10.94
81	4327.83	-13.26	1813.09	13.09
82	4623.33	-11.68	1793.08	-6.92
83	4899.13	-11.62	1796.62	-3.38
84	5138.55	-12.26	1790.46	-9.54
85	5472.45	-11.56	1782.76	-17.24
86	5868.10	-11.00	1810.66	10.66
87	6024.15	-13.57	1796.01	-3.99
88	6071.43	-15.40	1794.55	-5.45
89	6261.79	-13.12	1788.37	-11.63
90	6400.46	-12.09	1817.04	17.04
91	6554.54	-13.70	1807.73	7.73
92	6613.03	-15.11	1801.99	1.99
93	6662.27	-17.18	1798.03	-1.97
94	6720.68	-20.04	1796.65	-3.35
95	6783.21	-22.61	1804.21	4.21
96	6844.51	-24.57	1795.29	-4.71
97	6944.53	-27.27	1790.52	-9.48
98	6984.90	-28.01	1792.14	-7.86
99	7048.80	-29.26	1796.62	-3.38
100	7138.00	-30.59	1796.40	-3.60

Table A2
Profile AI-1 Data Listing

LG
LOCAL PROFILE SURVEY DATE TIME POINTS UNITS
AI 1 5 841027 1000 105 FT

	Y	Z	X	OFF LINE
1	-773.08	.95	3053.54	-6.46
2	-752.31	1.15	3057.43	-2.57
3	-724.01	1.30	3054.84	-1.16
4	-698.24	.89	3059.85	-1.15
5	-660.12	.69	3058.80	-1.20
6	-619.74	.82	3056.48	-3.52
7	-585.50	.77	3055.64	-4.36
8	-541.16	.94	3056.15	-3.85
9	-505.63	1.10	3056.72	-3.26
10	-477.98	1.23	3059.72	-2.28
11	-449.95	1.43	3063.24	3.24
12	-411.85	1.80	3063.34	3.34
13	-392.63	2.02	3063.03	3.03
14	-348.96	2.37	3063.72	3.72
15	-305.10	2.47	3069.87	9.87
16	-247.09	3.06	3069.81	9.81
17	-207.70	3.21	3077.79	17.79
18	-180.45	3.91	3081.46	21.46
19	-124.81	4.29	3082.00	22.00
20	-120.37	4.46	3078.02	18.02
21	-95.19	4.66	3072.70	12.70
22	-81.22	5.35	3071.75	11.75
23	-63.03	5.56	3067.93	7.93
24	-35.66	5.93	3065.28	5.28
25	-9.83	6.35	3061.49	1.49
26	3.48	6.43	3060.09	.09
27	26.07	7.06	3060.69	.69
28	53.54	8.64	3061.16	1.16
29	80.53	9.95	3061.14	1.14
30	103.36	11.75	3061.01	1.01
31	125.14	11.96	3060.90	.90
32	128.32	10.07	3059.96	-.04
33	138.00	8.72	3059.55	-.45
34	145.06	8.19	3059.79	-.21
35	147.84	6.74	3059.80	-.20
36	171.50	6.71	3059.68	-.32
37	202.57	7.11	3059.07	-.93
38	210.31	7.67	3057.93	-2.07
39	213.64	8.65	3058.14	-1.86
40	221.92	7.78	3060.11	.11
41	255.28	7.86	3060.14	.14
42	297.44	8.07	3058.98	-1.02
43	343.42	7.89	3058.57	-1.43
44	388.59	6.11	3058.44	-1.56
45	444.33	4.14	3059.86	-.14
46	444.46	4.14	3059.86	-.14
47	450.18	4.03	3060.49	.49
48	477.00	4.95	3036.00	-24.00
49	497.20	4.82	3060.60	.60
50	520.25	3.07	3062.58	2.58
51	528.00	2.71	3030.00	-30.00
52	538.99	2.03	3058.75	-1.25
53	564.00	1.44	3029.00	-31.00
54	595.00	.23	3026.00	-34.00
55	633.00	-1.28	3038.00	-22.00
56	672.00	-2.95	3042.00	-18.00
57	720.00	-4.66	3046.00	-14.00
58	750.00	-5.81	3047.00	-13.00
59	784.00	-7.31	3046.00	-14.00
60	819.00	-7.80	3049.00	-11.00
61	859.00	-8.56	3051.00	-9.00
62	920.00	-8.83	3056.00	-4.00
63	1021.00	-10.08	3056.00	-4.00
64	1070.00	-10.54	3060.00	.00
65	1216.00	-11.59	3055.00	-5.00
66	1420.00	-12.24	3051.00	-9.00
67	1610.00	-12.48	3045.00	-15.00

68	1850.00	-12.62	3035.00	-25.00
69	2152.00	-11.71	3031.00	-29.00
70	2373.00	-11.72	3029.00	-31.00
71	2550.00	-11.88	3031.00	-29.00
72	2784.00	-13.02	3034.00	-26.00
73	2938.00	-13.54	3041.00	-19.00
74	3068.00	-13.41	3047.00	-13.00
75	3231.00	-13.46	3055.00	-5.00
76	3429.00	-13.37	3050.00	-10.00
77	3602.53	-12.25	3049.19	-10.81
78	3759.78	-11.38	3051.80	-8.20
79	3957.92	-10.87	3056.17	-3.63
80	4084.45	-10.16	3047.49	-12.51
81	4276.66	-9.28	3046.13	-13.87
82	4483.89	-8.20	3055.45	-4.55
83	4602.48	-7.85	3054.17	-5.83
84	4833.69	-8.00	3051.42	-8.58
85	5007.67	-7.99	3042.50	-17.50
86	5204.95	-7.36	3066.64	6.64
87	5354.08	-7.97	3052.29	-7.71
88	5485.96	-8.41	3057.20	-2.80
89	5588.42	-8.99	3057.15	-2.85
90	5717.66	-10.05	3041.47	-18.53
91	5833.33	-11.45	3043.35	-16.65
92	5968.40	-12.36	3054.45	-5.55
93	6058.66	-13.49	3059.10	-.90
94	6129.63	-14.98	3056.47	-3.53
95	6172.11	-15.90	3057.28	-2.72
96	6235.47	-17.26	3055.33	-4.67
97	6301.23	-18.73	3051.07	-8.93
98	6398.34	-20.21	3039.32	-20.68
99	6513.77	-21.95	3046.19	-13.81
100	6619.05	-23.65	3049.00	-11.00
101	6741.88	-24.94	3051.89	-8.11
102	6854.28	-25.93	3033.23	-26.77
103	6957.24	-27.30	3028.35	-31.65
104	7067.61	-27.94	3018.85	-41.15
105	7221.35	-29.86	3007.95	-52.05

Table A3
Profile AI-2 Data Listing

LG	PROFILE	SURVEY DATE	TIME	POINTS	UNITS
AL	2	4	840926	98	FT
	Y	Z	X	OFF LINE	
1	-873.67	.79	4325.64	.64	
2	-852.66	2.63	4324.06	-.94	
3	-736.69	1.99	4326.31	1.31	
4	-701.79	1.79	4325.22	.22	
5	-656.02	2.04	4323.95	-1.05	
6	-604.10	1.81	4328.85	3.85	
7	-555.05	2.12	4325.10	.10	
8	-501.95	1.99	4324.14	-.86	
9	-461.09	2.18	4325.00	.00	
10	-409.53	2.18	4325.49	.49	
11	-375.45	2.35	4325.06	.06	
12	-330.27	3.24	4324.48	-.52	
13	-278.99	3.41	4325.99	.99	
14	-231.86	3.00	4325.35	.35	
15	-191.57	3.40	4325.50	.50	
16	-151.67	3.37	4326.00	1.00	
17	-110.26	3.23	4326.19	1.19	
18	-70.65	3.34	4325.60	.60	
19	-50.53	3.25	4325.72	.72	
20	-43.11	2.94	4325.14	.14	
21	-26.79	5.24	4325.04	.04	
22	-19.44	4.21	4325.21	.21	
23	.12	3.97	4324.97	-.03	
24	9.85	5.10	4324.49	-.51	
25	18.53	5.71	4324.94	-.06	
26	28.09	4.48	4325.76	.76	
27	37.97	4.36	4325.61	.61	
28	52.76	4.22	4325.48	.48	
29	62.08	3.73	4326.01	1.01	
30	86.33	3.66	4325.21	.21	
31	110.37	4.94	4325.60	.60	
32	122.82	4.32	4324.80	-.20	
33	136.64	3.63	4324.57	-.43	
34	151.05	5.21	4328.52	3.52	
35	159.80	4.70	4328.13	3.13	
36	174.81	5.66	4327.06	2.06	
37	198.99	4.94	4327.97	2.97	
38	228.68	5.06	4327.55	2.55	
39	275.43	5.81	4323.91	-1.09	
40	292.94	6.03	4324.11	-.89	
41	325.88	6.14	4324.70	-.30	
42	341.25	4.83	4323.54	-1.46	
43	357.63	5.44	4323.69	-1.31	
44	392.00	5.92	4323.85	-1.15	
45	425.04	7.25	4324.95	-.05	
46	451.61	5.36	4323.47	-1.53	
47	459.68	2.24	4325.66	.66	
48	474.22	4.78	4322.54	-2.46	
49	507.70	5.09	4325.06	.06	
50	538.25	5.28	4321.58	-3.42	
51	581.45	5.53	4327.29	2.29	
52	613.25	5.59	4320.87	-4.13	
53	637.81	3.20	4325.82	.82	
54	649.45	5.83	4328.12	3.12	
55	683.26	5.83	4326.59	1.59	
56	714.49	5.84	4322.51	-2.49	
57	752.39	5.02	4324.37	-.63	
58	786.98	4.20	4323.19	-1.81	
59	819.94	4.43	4323.99	-1.01	
60	849.67	4.97	4325.40	.40	
61	872.09	5.67	4325.92	.92	
62	893.22	5.61	4325.05	.05	
63	895.06	5.58	4327.10	2.10	
64	921.41	3.53	4326.51	3.51	
65	939.33	3.27	4324.89	-.11	
66	960.29	1.36	4325.44	.44	
67	1001.33	.24	4320.54	-4.46	

Table A4
Profile AI-3 Data Listing

LOCAL	PROFILE	SURVEY DATE	TIME	POINTS	UNITS
AI	3	4	840926	1100	68 FT
	Y	Z	X	OFF LINE	
1	-204.21	-0.04	5613.78	-1.22	
2	-184.44	.85	5614.84	-.16	
3	-159.98	1.95	5614.08	-.92	
4	-148.94	1.40	5614.29	-.71	
5	-134.54	2.60	5614.82	-.18	
6	-113.80	3.22	5614.85	-.15	
7	-98.09	3.16	5614.99	-.01	
8	-77.88	3.15	5614.66	-.34	
9	-63.37	3.73	5615.40	.40	
10	-56.66	3.49	5615.67	.67	
11	-42.79	3.76	5615.23	.23	
12	-10.60	3.79	5615.28	.28	
13	-8.35	3.23	5615.25	.25	
14	11.13	3.70	5615.22	.22	
15	16.28	4.12	5615.69	.69	
16	34.81	3.94	5615.02	.02	
17	68.21	4.05	5614.67	-.33	
18	99.85	4.14	5616.18	1.18	
19	138.40	4.14	5613.09	-1.91	
20	184.57	4.27	5614.61	-.39	
21	228.97	4.12	5614.87	-.13	
22	281.36	4.34	5616.70	1.70	
23	317.67	4.50	5614.20	-.80	
24	355.58	4.74	5616.80	1.80	
25	390.16	4.93	5613.40	-1.60	
26	432.38	5.55	5616.67	1.67	
27	463.42	5.72	5615.28	.28	
28	501.27	6.22	5614.14	-.84	
29	540.23	6.47	5614.65	-.35	
30	584.95	6.83	5614.23	-.77	
31	616.35	7.10	5614.19	-.81	
32	651.25	7.30	5614.00	-1.00	
33	685.80	6.63	5612.41	-2.59	
34	719.72	6.48	5616.32	1.32	
35	749.79	6.14	5615.04	.04	
36	793.28	2.34	5612.54	-2.46	
37	816.61	.90	5610.99	-4.01	
38	855.37	-.07	5603.99	-11.01	
39	873.64	-.67	5601.14	-13.86	
40	895.74	-1.05	5598.99	-16.01	
41	916.18	-1.95	5599.30	-15.70	
42	934.87	-2.30	5600.86	-14.14	
43	968.01	-3.45	5604.33	-10.67	
44	998.49	-4.62	5607.25	-7.75	
45	1022.56	-5.57	5609.43	-5.57	
46	1062.14	-7.65	5613.33	-1.67	
47	1082.80	-8.50	5615.41	.41	
48	1111.42	-9.29	5614.81	-.19	
49	1197.86	-11.40	5610.30	-4.70	
50	1281.40	-13.38	5612.01	-2.99	
51	1371.70	-15.29	5611.20	-3.80	
52	1536.12	-17.51	5612.84	-2.16	
53	1718.30	-18.79	5613.60	-1.40	
54	2054.25	-19.85	5606.77	-8.23	
55	2431.34	-20.93	5607.09	-7.91	
56	2809.89	-21.97	5604.13	-10.87	
57	3207.10	-23.02	5567.24	-47.76	
58	3282.15	-23.21	5538.28	-76.72	
59	3831.00	-24.56	5682.23	67.23	
60	4216.55	-25.41	5590.84	-24.16	
61	4671.90	-25.92	5578.41	-36.59	
62	5253.57	-26.21	5605.93	-9.07	
63	5637.35	-26.55	5596.73	-18.27	
64	6114.62	-26.04	5598.90	-16.10	
65	6382.79	-28.87	5581.06	-33.94	
66	6590.17	-29.17	5567.19	-47.81	
67	6784.23	-30.23	5597.64	-17.36	
68	6891.55	-30.67	5644.06	29.06	

Table A5
Profile AI-4 Data Listing

LD
LOCAL PROFILE SURVEY DATE TIME POINTS UNITS
A1 4 4 840926 1200 99 FT

	Y	Z	X	OFF LINE
1	-596.74	.37	6908.58	3.58
2	-560.31	1.78	6907.06	2.06
3	-557.40	2.26	6907.06	2.06
4	-545.75	2.93	6906.64	1.64
5	-537.95	3.00	6906.25	1.25
6	-528.56	2.74	6906.31	1.31
7	-509.22	2.49	6906.26	1.26
8	-485.45	2.67	6906.31	1.31
9	-475.63	2.54	6907.95	2.95
10	-464.39	3.13	6904.89	-1.11
11	-450.33	2.62	6905.37	.37
12	-433.63	2.72	6906.92	1.92
13	-411.13	3.04	6908.37	3.37
14	-383.97	3.13	6906.30	1.30
15	-358.55	2.88	6906.00	1.00
16	-336.80	3.41	6905.68	.68
17	-328.33	3.87	6905.35	.35
18	-311.77	3.44	6905.60	.60
19	-301.57	3.00	6906.52	1.52
20	-293.17	3.07	6905.74	.74
21	-274.53	4.65	6904.94	-0.06
22	-251.78	3.96	6904.76	-.24
23	-240.23	4.07	6905.48	.48
24	-230.02	3.24	6905.27	.27
25	-218.14	2.76	6905.73	.73
26	-181.73	2.61	6904.65	-.35
27	-153.23	2.93	6905.33	.33
28	-123.36	3.08	6905.26	.26
29	-97.86	3.35	6905.13	.13
30	-68.11	3.79	6905.13	.13
31	-46.86	4.00	6905.45	.45
32	-39.60	4.78	6905.44	.44
33	-31.11	4.10	6905.15	.15
34	-25.47	3.95	6905.05	.05
35	24.19	4.03	6903.82	-1.18
36	67.24	4.29	6904.56	-.44
37	107.23	4.21	6905.70	.70
38	157.76	4.47	6904.35	-.65
39	171.71	5.17	6905.07	.07
40	220.56	5.73	6905.67	.67
41	249.86	4.37	6904.28	-.72
42	296.19	4.60	6904.08	-.92
43	331.24	4.76	6903.77	-1.23
44	361.08	5.01	6906.42	1.42
45	367.62	5.90	6906.20	1.20
46	386.63	5.42	6905.37	.37
47	413.39	5.92	6902.74	-2.26
48	430.87	6.22	6903.07	-1.93
49	453.69	5.99	6903.12	-1.88
50	475.56	6.53	6904.36	-.64
51	485.02	6.16	6903.98	-1.02
52	486.93	6.06	6900.00	-5.00
53	509.46	6.39	6905.47	.47
54	544.48	6.67	6905.71	.71
55	586.64	7.34	6904.56	-.44
56	635.77	7.88	6904.09	-.91
57	650.32	7.98	6906.86	-4.14
58	678.82	8.11	6903.02	-1.98
59	714.69	7.26	6903.14	-1.86
60	718.64	7.51	6904.32	-.68
61	749.57	6.92	6905.18	.18
62	756.79	3.95	6905.03	.03
63	779.47	3.69	6904.54	-.46
64	795.42	2.76	6905.10	.10
65	812.93	1.25	6904.61	-.39
66	827.60	.23	6904.87	-.13
67	835.04	-1.10	6904.63	-.37

68	849.43	-1.29	6903.65	-1.35
69	894.91	-2.74	6906.88	1.88
70	915.47	-3.52	6914.77	9.77
71	959.32	-4.06	6916.41	11.41
72	1014.76	-2.61	6913.98	8.98
73	1054.14	-3.53	6906.51	1.51
74	1100.09	-5.55	6905.51	.51
75	1113.31	-6.38	6906.24	1.24
76	1147.62	-8.39	6915.12	10.12
77	1206.49	-11.09	6908.78	3.78
78	1244.37	-12.28	6907.53	2.53
79	1341.20	-14.87	6909.33	4.33
80	1355.95	-15.37	6908.17	3.17
81	1490.16	-17.29	6906.76	1.76
82	1581.17	-18.37	6910.14	5.14
83	1658.22	-19.10	6902.55	-2.45
84	1697.52	-19.83	6905.68	.68
85	1871.90	-20.12	6910.93	5.93
86	1996.06	-20.92	6920.03	15.03
87	2151.42	-20.17	6919.00	14.00
88	2366.79	-21.27	6907.14	2.14
89	2687.74	-22.21	6913.67	8.67
90	3022.92	-23.10	6920.81	15.81
91	3392.63	-24.11	6877.93	-27.07
92	3872.37	-25.46	6925.70	20.70
93	4241.84	-26.46	6911.54	6.54
94	4753.46	-27.31	6900.92	-4.08
95	5214.53	-27.80	6910.33	5.33
96	5619.13	-28.36	6906.47	1.47
97	5898.56	-29.24	6915.22	10.22
98	6163.27	-29.85	6917.58	12.58
99	6405.66	-30.57	6916.42	11.42

Table A6
Profile AI-5 Data Listing

LE
LOCAL PROFILE SURVEY DATE TIME POINTS UNITS
AI 5 4 841004 800 104 FT

	Y	Z	X	OFF LINE
1	-387.48	1.12	8125.72	.72
2	-375.67	1.50	8124.15	-.85
3	-374.44	1.71	8124.19	-.81
4	-362.55	2.88	8124.54	-.46
5	-341.46	4.11	8124.25	-.75
6	-321.66	5.25	8125.11	.11
7	-293.90	4.50	8125.12	.12
8	-280.43	4.57	8127.23	2.23
9	-272.20	3.76	8126.61	1.61
10	-251.04	3.81	8125.65	.65
11	-216.24	4.23	8125.56	.56
12	-193.77	4.52	8125.82	.82
13	-160.30	4.38	8125.35	.35
14	-132.77	4.73	8125.25	.25
15	-106.17	5.14	8125.16	.16
16	-78.67	5.92	8125.16	.16
17	-42.90	6.66	8125.77	.77
18	-21.89	7.76	8125.34	.34
19	12.95	8.69	8124.66	-.34
20	25.17	8.90	8124.44	-.56
21	41.98	8.62	8123.90	-1.10
22	53.49	7.52	8124.26	-.74
23	73.95	5.16	8124.18	-.82
24	93.66	4.09	8124.05	-.95
25	109.00	3.14	8122.28	-2.72
26	140.37	3.00	8121.56	-3.44
27	152.43	2.96	8121.95	-3.05
28	173.56	2.92	8122.36	-2.64
29	176.27	2.38	8122.24	-2.76
30	191.55	1.63	8121.22	-3.78
31	202.21	-.02	8118.35	-6.65
32	247.59	-.34	8141.08	16.08
33	262.32	-.38	8126.18	1.18
34	266.25	.42	8126.09	1.09
35	276.96	1.83	8125.40	4.40
36	307.89	3.14	8129.81	4.81
37	332.94	3.62	8129.91	4.91
38	362.12	4.18	8128.37	3.37
39	397.37	4.51	8125.37	.37
40	427.04	4.68	8128.30	3.30
41	461.95	4.84	8128.62	3.62
42	489.11	4.90	8127.68	2.68
43	507.04	5.69	8127.11	2.11
44	527.49	6.87	8129.47	4.47
45	545.02	6.62	8130.47	5.47
46	569.52	6.38	8129.77	4.77
47	590.48	7.49	8127.04	2.04
48	602.22	6.86	8127.45	2.45
49	605.95	5.96	8126.26	1.26
50	619.40	5.98	8124.09	-.91
51	645.70	6.01	8121.16	-3.84
52	676.26	6.33	8123.62	-1.38
53	710.12	6.68	8121.95	-3.05
54	743.96	7.27	8125.11	.11
55	773.38	7.62	8125.73	.73
56	804.39	7.98	8123.34	-1.66
57	839.71	8.18	8124.19	-.81
58	867.27	8.09	8125.58	.58
59	879.67	8.19	8125.42	.42
60	886.20	7.91	8125.28	.28
61	895.52	6.64	8125.23	.23
62	899.96	7.59	8124.73	-.27
63	915.31	4.51	8125.38	.38
64	929.25	3.23	8124.73	-.27
65	948.46	3.56	8124.78	-.22
66	970.18	1.74	8123.82	-1.18
67	993.59	-.01	8122.47	-2.53

68	1021.46	-1.42	8110.86	-14.14
69	1034.82	-2.10	8112.77	-12.23
70	1057.77	-2.88	8115.09	-9.91
71	1077.72	-3.27	8117.62	-7.38
72	1105.78	-4.07	8121.00	-4.00
73	1127.10	-4.57	8121.90	-3.10
74	1169.29	-3.98	8123.47	-1.53
75	1246.08	-4.43	8128.67	3.67
76	1269.78	-5.27	8130.48	5.48
77	1283.12	-5.78	8130.19	5.19
78	1308.09	-7.11	8130.97	5.97
79	1335.55	-8.56	8128.14	3.14
80	1378.06	-10.32	8129.71	4.71
81	1458.27	-11.77	8130.79	5.79
82	1521.33	-13.37	8130.76	5.76
83	1620.75	-15.32	8129.17	4.17
84	1710.73	-16.55	8130.82	5.82
85	1810.87	-17.99	8130.45	5.45
86	1919.68	-18.28	8129.87	4.87
87	2180.89	-19.75	8131.74	6.74
88	2405.88	-20.80	8132.92	7.92
89	2675.33	-21.75	8157.37	32.37
90	3021.67	-22.86	8153.60	28.60
91	3186.04	-23.36	8120.82	-4.18
92	3437.73	-24.15	8187.62	62.62
93	3713.33	-25.01	8104.43	-20.57
94	3888.51	-25.56	8133.30	8.30
95	3930.76	-25.62	8067.06	-57.94
96	4351.69	-27.13	8168.58	43.58
97	4845.49	-28.18	8092.72	-32.28
98	5267.02	-29.01	8158.60	33.60
99	5604.15	-29.35	8112.51	-12.49
100	5839.21	-29.99	8156.22	31.22
101	6089.69	-30.83	8131.15	6.15
102	6298.56	-31.63	8129.39	4.39
103	6413.56	-32.21	8149.37	24.37
104	6512.71	-32.58	8164.97	39.97

Table A7
Profile AI-6 Data Listing

LOCAL PROFILE SURVEY DATE TIME POINTS UNITS
AI 6 4 841004 1215 95 FT

	Y	Z	X	OFF LINE
1	-788.67	.25	10126.15	1.15
2	-774.47	1.50	10126.73	1.73
3	-773.23	1.95	10127.15	2.15
4	-766.77	1.80	10126.56	1.56
5	-762.69	1.21	10126.39	1.39
6	-748.20	1.16	10125.38	.38
7	-717.44	1.31	10123.87	-1.13
8	-661.83	1.23	10123.67	-1.33
9	-656.12	1.38	10125.57	.57
10	-618.60	1.53	10125.77	.77
11	-563.32	1.49	10124.93	-.07
12	-546.85	1.57	10124.78	-.22
13	-513.53	1.60	10125.03	.03
14	-469.34	1.74	10125.72	.72
15	-428.73	1.85	10125.46	.46
16	-173.86	2.17	10125.03	.03
17	-133.37	2.16	10125.54	.54
18	-95.65	2.27	10125.04	.04
19	-53.30	2.32	10124.95	-.05
20	-21.93	2.38	10124.62	-.18
21	19.59	2.40	10124.69	-.31
22	42.56	2.44	10124.94	-.06
23	73.07	2.53	10124.18	-.62
24	108.48	2.57	10123.99	-1.01
25	140.71	2.71	10125.61	.61
26	183.84	2.96	10122.32	-2.68
27	216.10	3.04	10124.43	-.56
28	252.58	3.07	10124.69	-.31
29	284.46	3.44	10125.61	.61
30	318.54	3.66	10124.30	-.70
31	353.27	3.75	10125.46	.46
32	376.86	3.97	10124.21	-.79
33	389.03	4.53	10125.38	.38
34	396.52	5.02	10124.80	-.20
35	415.75	5.62	10125.82	.82
36	436.72	6.25	10124.87	-.13
37	447.03	6.88	10125.01	.01
38	458.88	6.54	10126.32	1.32
39	461.60	4.91	10126.61	1.61
40	484.03	4.80	10127.17	2.17
41	524.23	5.11	10130.62	5.62
42	540.66	5.28	10128.95	3.95
43	544.25	6.12	10129.47	4.47
44	552.07	6.33	10129.09	4.09
45	565.38	7.66	10128.97	3.97
46	596.78	8.69	10128.84	3.84
47	606.59	8.42	10127.68	2.68
48	617.27	6.77	10127.01	2.01
49	625.85	5.62	10126.59	1.59
50	667.92	5.98	10123.04	-1.96
51	678.08	6.25	10122.62	-2.38
52	699.80	6.36	10123.73	-1.27
53	731.10	6.73	10124.87	-.13
54	770.81	7.10	10122.51	-2.49
55	805.79	7.47	10124.35	-.65
56	835.01	7.72	10125.54	.54
57	865.64	7.95	10125.75	.75
58	889.63	8.61	10124.73	-.27
59	899.92	8.15	10125.38	.38
60	905.17	7.91	10125.12	.12
61	935.23	4.30	10123.45	-1.55
62	958.15	2.65	10121.51	-3.49
63	983.28	1.46	10120.45	-4.55
64	1026.67	-.31	10122.37	-2.61
65	1029.39	-.46	10127.22	2.22
66	1036.38	-1.11	10122.26	-2.74
67	1050.90	-2.00	10129.69	4.69

68	1082.73	-3.22	10130.75	5.75
69	1123.81	-4.59	10129.08	4.08
70	1194.01	-2.84	10131.24	6.24
71	1256.92	-4.25	10132.85	7.85
72	1320.50	-6.82	10134.74	9.74
73	1368.92	-9.94	10134.23	9.23
74	1460.05	-10.94	10130.26	5.26
75	1517.66	-12.27	10133.11	8.11
76	1565.68	-13.33	10133.05	8.05
77	1598.32	-14.28	10134.49	9.49
78	1665.02	-15.05	10126.72	1.72
79	1729.05	-15.87	10125.83	.83
80	1819.93	-16.99	10125.25	.25
81	1921.01	-17.89	10126.00	1.00
82	2042.41	-18.87	10125.36	.36
83	2182.38	-19.82	10126.32	1.32
84	2344.10	-20.75	10135.04	10.04
85	2501.74	-21.60	10130.82	5.82
86	2773.14	-22.82	10129.08	4.08
87	3045.61	-23.93	10126.54	1.54
88	3249.49	-24.62	10122.05	-2.95
89	3519.49	-25.47	10115.62	-9.38
90	3778.45	-26.38	10126.86	1.86
91	4056.32	-27.44	10125.46	.46
92	4195.44	-28.17	10124.28	-.72
93	4427.24	-28.67	10121.55	-3.45
94	4576.95	-29.30	10128.05	3.05
95	4841.64	-29.90	10128.67	3.67

Table A8
Profile AI-8 Data Listing

LD	PROFILE	SURVEY DATE	TIME	POINTS	UNITS				
AI	8	4	841004	1345	102	FT			
	Y	Z	X	OFF LINE					
1	-816.57	.98	12168.99	-1.01		68	699.56	7.29	12170.37
2	-808.69	1.82	12169.00	-1.00		69	728.12	3.22	12169.22
3	-805.86	1.42	12169.64	-.36		70	750.91	3.54	12168.39
4	-785.59	1.24	12172.30	2.30		71	789.34	.61	12157.23
5	-760.91	1.28	12171.99	1.99		72	808.49	-.32	12157.07
6	-746.42	1.32	12171.95	1.95		73	825.97	-1.43	12157.77
7	-720.22	1.19	12172.83	2.83		74	846.83	-2.16	12158.99
8	-689.93	1.31	12171.27	1.27		75	867.62	-2.65	12159.82
9	-655.63	1.40	12170.59	.59		76	888.20	-3.12	12160.52
10	-629.51	1.54	12170.35	.35		77	909.58	-3.96	12161.55
11	-599.07	1.31	12170.33	.33		78	950.39	-3.88	12163.23
12	-578.50	1.28	12170.92	.92		79	980.76	-1.82	12164.24
13	-550.37	1.28	12170.45	.45		80	1003.21	-2.59	12164.94
14	-516.62	1.27	12170.62	.62		81	1022.31	-3.10	12166.22
15	-492.17	1.36	12170.19	.19		82	1074.85	-4.81	12169.04
16	-459.79	1.40	12170.11	.11		83	1115.85	-7.37	12174.78
17	-440.50	1.47	12169.77	-.23		84	1135.85	-8.29	12171.40
18	-412.29	1.50	12169.25	-.75		85	1200.57	-8.89	12173.66
19	-387.22	1.52	12170.04	.04		86	1321.47	-10.98	12172.36
20	-358.27	1.71	12170.34	.34		87	1364.67	-12.46	12170.33
21	-330.90	1.81	12169.83	-.17		88	1422.37	-13.27	12170.90
22	-305.36	1.98	12170.29	.29		89	1474.65	-14.72	12174.51
23	-288.48	2.02	12170.16	.16		90	1544.98	-16.09	12170.34
24	-256.51	2.03	12170.31	.31		91	1642.36	-17.95	12170.78
25	-240.14	2.36	12169.43	-.57		92	1778.13	-20.41	12172.70
26	-233.17	2.60	12169.36	-.64		93	1923.84	-21.35	12170.38
27	-228.73	2.20	12170.12	.12		94	2139.49	-22.83	12173.46
28	-196.68	2.26	12170.16	.16		95	2268.25	-23.44	12174.03
29	-171.36	2.58	12170.21	.21		96	2402.29	-24.35	12174.52
30	-153.72	2.66	12170.36	.36		97	2614.04	-25.60	12164.87
31	-145.88	2.89	12170.34	.34		98	2864.13	-26.60	12188.43
32	-128.05	3.03	12170.10	.10		99	3149.55	-27.50	12173.67
33	-111.00	3.02	12169.99	-.01		100	3516.77	-28.67	12178.57
34	-101.45	2.99	12169.90	-.10		101	3724.94	-29.29	12181.96
35	-97.70	2.84	12170.09	.09		102	3859.15	-29.50	12151.15
36	-85.62	2.73	12170.26	.26					
37	-55.77	2.64	12170.17	.17					
38	-21.63	2.73	12169.75	-.25					
39	19.71	3.09	12169.64	-.36					
40	52.94	3.24	12169.39	-.61					
41	76.12	3.28	12170.76	.76					
42	110.53	3.39	12170.53	.53					
43	119.03	3.73	12172.58	2.58					
44	123.75	3.61	12172.68	2.68					
45	160.47	3.60	12169.59	-.41					
46	187.98	3.68	12171.27	1.27					
47	224.81	3.82	12168.32	-1.68					
48	250.90	3.98	12169.01	-.99					
49	268.18	4.29	12168.59	-1.41					
50	286.76	4.13	12172.07	2.07					
51	322.29	4.14	12172.38	2.38					
52	353.83	4.66	12173.25	3.25					
53	360.77	5.11	12172.81	2.81					
54	366.53	4.75	12171.82	1.82					
55	397.14	4.88	12171.41	1.41					
56	423.16	5.17	12169.77	-.23					
57	455.80	5.62	12169.75	-.25					
58	476.99	5.75	12169.96	-.04					
59	509.11	6.04	12170.06	.06					
60	537.68	6.27	12166.36	-3.64					
61	562.17	6.83	12166.20	-3.80					
62	585.53	6.85	12170.23	.23					
63	612.03	7.02	12170.86	.86					
64	634.31	7.17	12172.45	2.45					
65	657.39	7.32	12172.32	2.32					
66	670.35	7.71	12170.66	.66					
67	685.69	7.71	12170.06	.06					

Table A9
Profile AI-10 Data Listing

LD	PROFILE	SURVEY DATE	TIME	POINTS	UNITS				
AI	10	4	841004	1540	76	FT			
	Y	Z	X	OFF LINE					
1	-102.51	1.17	14889.55	.55		67	1794.48	-21.67	14888.64
2	-84.97	1.47	14888.75	-.25		68	1951.82	-22.85	14893.07
3	-59.73	1.43	14889.44	.44		69	2051.10	-23.89	14892.72
4	-36.02	1.79	14889.50	.50		70	2203.71	-25.01	14891.19
5	-13.03	1.79	14888.50	-.50		71	2340.81	-26.03	14888.02
6	-11.23	2.09	14888.55	-.45		72	2484.27	-26.96	14889.87
7	17.38	2.49	14889.32	.32		73	2641.18	-27.90	14890.51
8	43.37	2.50	14889.94	.94		74	2786.97	-28.78	14889.93
9	53.93	2.54	14889.13	.13		75	3101.37	-28.71	14880.59
10	66.45	1.46	14889.11	.11		76	3296.44	-31.00	14884.77
11	74.65	1.35	14889.10	.10					
12	93.20	2.07	14889.67	.67					
13	101.99	2.49	14890.05	1.05					
14	110.96	2.92	14890.32	1.32					
15	130.23	3.21	14889.42	.42					
16	155.36	3.71	14887.23	-1.77					
17	186.64	4.05	14885.40	-3.60					
18	203.61	3.91	14886.66	-2.34					
19	230.03	3.78	14886.19	-2.81					
20	253.92	4.94	14888.47	-.53					
21	262.77	4.72	14886.26	-.74					
22	272.10	4.63	14888.12	-.86					
23	296.95	4.49	14887.14	-1.86					
24	313.98	4.39	14886.96	-2.04					
25	325.41	4.76	14887.17	-1.83					
26	353.66	5.10	14887.15	-1.85					
27	384.68	5.19	14886.62	-2.38					
28	411.84	5.79	14887.65	-1.35					
29	422.02	6.41	14887.72	-1.28					
30	438.16	6.60	14886.17	-.83					
31	461.18	6.80	14888.71	-.29					
32	477.74	6.94	14890.72	1.72					
33	490.91	6.72	14890.24	1.24					
34	509.95	6.69	14891.76	2.76					
35	521.47	6.56	14886.02	-2.98					
36	536.93	6.77	14886.54	-.46					
37	567.59	6.99	14890.85	1.85					
38	601.23	7.08	14885.48	-3.52					
39	629.32	6.96	14886.26	-2.74					
40	671.78	7.22	14888.60	-.40					
41	676.70	7.44	14889.01	.01					
42	691.20	5.66	14889.51	.51					
43	699.73	7.22	14888.56	-.44					
44	714.18	3.23	14888.91	-.09					
45	734.52	3.62	14888.49	-.51					
46	747.65	3.39	14888.67	-.33					
47	759.60	2.52	14888.59	-.41					
48	776.37	1.22	14889.76	.76					
49	798.75	-.38	14890.38	1.38					
50	844.77	-2.73	14890.99	1.99					
51	879.41	-3.61	14892.06	3.06					
52	923.74	-4.56	14893.31	4.31					
53	945.81	-4.81	14891.67	2.67					
54	987.05	-3.92	14890.30	1.30					
55	1060.37	-4.00	14892.10	3.10					
56	1109.06	-5.93	14892.96	3.96					
57	1161.92	8.07	14892.02	3.02					
58	1204.21	-9.35	14893.87	4.87					
59	1291.59	-11.31	14893.05	4.05					
60	1338.93	-12.07	14891.58	2.58					
61	1396.18	-13.68	14890.90	1.90					
62	1453.30	-15.23	14890.59	1.59					
63	1515.99	-17.08	14890.84	1.84					
64	1591.47	-18.22	14890.39	1.39					
65	1638.73	-19.38	14887.91	-1.09					
66	1712.44	-20.19	14889.93	.93					

Table A10
Profile AI-12 Data Listing

LOCAL PROFILE SURVEY DATE TIME POINTS UNITS
A1 12 4 B41004 1650 139 FT

	Y	Z	X	OFF LINE
1	-1594.37	-1.04	18070.39	.39
2	-1593.70	1.04	18070.09	.09
3	-1589.05	1.21	18068.08	-1.92
4	-1588.51	.21	18068.53	-1.47
5	-1560.94	.33	18072.48	2.48
6	-1549.02	.24	18075.31	5.31
7	-1545.20	.34	18074.04	4.04
8	-1537.54	.59	18075.28	5.28
9	-1537.15	1.14	18075.12	5.12
10	-1524.37	.99	18075.91	5.91
11	-1488.86	1.04	18071.79	1.79
12	-1477.47	1.63	18073.04	3.04
13	-1467.21	.45	18079.15	9.15
14	-1432.04	.28	18072.76	2.76
15	-1429.51	.78	18072.76	2.76
16	-1408.56	-.04	18073.70	3.70
17	-1395.02	1.04	18074.41	4.41
18	-1386.71	1.32	18076.47	6.47
19	-1365.17	.99	18083.44	13.44
20	-1333.27	-.35	18083.19	13.19
21	-1300.75	1.00	18074.92	4.92
22	-1281.51	1.31	18070.42	.42
23	-1251.48	1.13	18063.38	-6.62
24	-1232.32	-.07	18069.31	-.69
25	-1216.99	-.34	18062.11	-7.89
26	-1201.45	1.22	18065.86	-4.14
27	-1194.67	1.47	18065.88	-4.12
28	-1185.67	1.10	18067.14	-2.86
29	-1160.14	-.18	18064.59	-5.41
30	-1136.64	1.09	18068.24	-1.76
31	-1118.30	1.17	18065.06	-4.94
32	-1082.31	1.49	18068.18	-1.82
33	-1073.19	.75	18071.62	1.62
34	-1063.13	-.11	18070.45	.45
35	-1055.50	1.26	18074.87	4.87
36	-1046.69	1.09	18075.07	5.07
37	-1025.93	1.09	18072.31	2.31
38	-998.24	1.23	18071.72	1.72
39	-969.45	1.30	18073.83	3.83
40	-960.42	.32	18072.81	2.81
41	-945.17	1.06	18074.91	4.91
42	-915.95	1.11	18073.46	3.46
43	-885.75	1.13	18073.31	3.31
44	-849.66	1.18	18075.12	5.12
45	-816.54	1.20	18075.09	5.09
46	-784.57	1.29	18072.24	2.24
47	-753.65	1.21	18071.97	1.97
48	-711.47	1.39	18070.33	.33
49	-696.13	2.58	18071.34	1.34
50	-664.35	2.16	18070.46	.46
51	-647.55	1.58	18071.20	1.20
52	-647.38	1.62	18071.01	1.01
53	-640.94	1.27	18070.93	.93
54	-632.71	.86	18069.51	-.49
55	-625.93	.22	18068.30	-1.70
56	-610.98	1.17	18069.27	-.73
57	-566.45	1.41	18071.84	1.84
58	-523.72	1.38	18071.38	1.38
59	-484.47	1.50	18074.69	4.69
60	-439.02	1.63	18072.25	2.25
61	-393.12	1.70	18071.68	1.68
62	-350.33	1.78	18071.90	1.90
63	-309.13	1.86	18069.41	-.59
64	-269.94	1.94	18069.17	-.83
65	-232.13	2.11	18068.63	-1.37
66	-191.27	2.19	18069.90	-.10
67	-142.94	2.26	18069.10	-.90

68	-103.92	2.36	18069.71	-.29
69	-64.84	2.47	18069.66	-.14
70	-43.76	2.86	18070.11	-.11
71	-11.85	3.41	18068.99	-1.01
72	7.34	5.05	18069.90	-.10
73	18.81	3.83	18069.78	-.22
74	32.51	2.94	18070.36	.36
75	58.60	3.00	18070.17	.17
76	70.90	3.64	18071.38	1.38
77	79.65	4.07	18071.93	1.93
78	91.25	3.26	18070.44	.44
79	126.39	3.06	18070.72	.72
80	160.68	3.17	18071.90	1.90
81	187.10	3.40	18071.42	1.42
82	217.45	3.43	18069.20	-.80
83	234.94	4.54	18072.03	2.03
84	245.74	4.26	18071.21	1.21
85	275.18	5.05	18071.03	1.03
86	299.59	5.68	18070.69	.69
87	332.76	5.77	18069.56	-.44
88	363.31	6.14	18067.92	-2.08
89	368.53	6.52	18067.89	-2.11
90	371.68	6.19	18067.51	-2.49
91	383.95	6.11	18067.37	-2.63
92	417.78	6.33	18067.40	-2.60
93	451.62	6.54	18065.74	-4.26
94	486.82	6.77	18069.23	-.77
95	515.08	7.15	18069.49	-.51
96	549.43	7.47	18071.28	1.28
97	584.11	7.52	18071.15	1.15
98	618.90	7.23	18070.57	.57
99	625.56	7.52	18070.44	.44
100	633.39	6.73	18070.31	.31
101	649.79	6.96	18069.85	-.15
102	666.60	3.77	18070.06	.06
103	710.19	1.38	18057.21	-12.79
104	720.51	.45	18057.39	-12.61
105	757.62	-.26	18059.19	-10.81
106	815.57	-2.42	18063.96	-6.04
107	834.35	-2.65	18065.42	-4.58
108	856.16	-3.22	18067.64	-2.36
109	895.01	-3.94	18070.10	.10
110	912.75	-3.80	18071.83	1.83
111	937.60	-2.60	18073.90	3.90
112	955.12	-2.71	18073.78	3.78
113	1009.73	-4.78	18073.83	3.83
114	1049.67	-6.65	18073.89	3.89
115	1098.88	-8.38	18072.76	2.76
116	1146.73	-9.36	18072.87	2.87
117	1190.66	-10.10	18074.18	4.18
118	1234.03	-11.17	18072.41	2.41
119	1295.12	-11.87	18073.59	3.59
120	1359.97	-13.48	18076.11	6.11
121	1390.60	-14.31	18078.47	8.47
122	1444.22	-15.72	18073.49	3.49
123	1523.32	-17.03	18073.50	3.50
124	1576.79	-18.13	18072.80	2.80
125	1665.28	-19.98	18072.48	2.48
126	1767.05	-21.29	18073.68	3.68
127	1856.99	-22.05	18076.52	6.52
128	1981.38	-24.10	18077.47	7.47
129	2161.45	-24.12	18071.34	1.34
130	2480.42	-22.96	18052.79	-17.21
131	2735.37	-22.51	18058.19	-11.81
132	2825.82	-23.56	18069.18	-.82
133	2937.60	-25.61	18077.79	7.79
134	3094.85	-28.04	18084.00	14.00
135	3426.56	-28.97	18071.99	1.99
136	3724.38	-28.70	18051.77	-18.23
137	3922.60	-28.97	18061.02	-8.98
138	3991.34	-29.50	18070.00	.00
139	4086.19	-30.48	18078.33	8.33

Table A11
Profile AI-14 Data Listing

LOCAL PROFILE SURVEY DATE TIME POINTS UNITS
AI 14 4 841005 830 97 FT

	Y	Z	X	OFF LINE
1	-443.63	1.50	21025.49	.49
2	-442.44	1.93	21024.59	-.41
3	-430.23	1.42	21022.96	-2.04
4	-413.65	1.34	21024.18	-.62
5	-402.62	2.39	21024.02	-.98
6	-386.05	2.11	21024.42	-.58
7	-353.50	1.50	21024.66	-.34
8	-336.82	1.21	21024.19	-.81
9	-331.36	.49	21024.04	-.96
10	-325.42	.83	21025.15	.15
11	-324.05	1.32	21025.94	.94
12	-323.16	1.45	21025.40	.40
13	-303.98	.91	21025.27	.27
14	-298.26	.92	21025.28	.28
15	-267.94	1.22	21024.71	-.29
16	-264.71	2.11	21024.41	-.59
17	-253.40	2.56	21024.78	-.22
18	-246.75	1.89	21024.78	-.22
19	-226.65	2.08	21026.38	1.38
20	-191.72	1.80	21025.20	.20
21	-166.37	1.82	21024.87	-.13
22	-133.45	1.59	21024.93	-.07
23	-106.55	1.74	21025.90	.90
24	-82.88	1.75	21024.78	-.22
25	-53.48	2.41	21025.26	.26
26	-27.91	3.07	21023.96	-1.04
27	.00	3.95	21024.22	-.78
28	16.05	4.03	21025.62	.62
29	36.95	4.68	21025.14	.14
30	51.64	4.17	21026.93	1.93
31	59.78	4.71	21026.02	1.02
32	71.31	4.47	21025.86	.86
33	94.00	4.06	21023.56	-1.44
34	119.33	4.27	21025.08	.08
35	145.49	4.33	21025.20	.20
36	168.79	4.38	21023.78	-1.22
37	186.01	4.79	21018.85	-6.15
38	196.59	4.21	21018.98	-6.02
39	207.24	4.00	21020.98	-4.02
40	233.04	4.85	21022.88	-2.12
41	256.41	5.41	21023.57	-1.43
42	269.45	5.92	21024.99	-.01
43	279.01	5.25	21024.66	-.34
44	302.23	5.28	21021.22	-3.78
45	314.58	5.29	21022.47	-2.53
46	340.61	5.40	21022.98	-2.02
47	363.23	5.89	21022.40	-2.60
48	381.23	5.80	21021.79	-3.21
49	389.17	6.39	21021.87	-3.13
50	394.70	6.11	21021.17	-3.83
51	402.33	7.38	21022.57	-2.43
52	422.35	8.53	21023.00	-2.00
53	433.26	8.28	21023.57	-1.43
54	445.30	8.94	21024.17	-.83
55	461.53	6.70	21021.67	-3.33
56	467.49	6.87	21025.84	.84
57	488.35	6.43	21022.24	-2.76
58	521.23	6.55	21023.05	-1.95
59	550.66	6.67	21022.64	-2.36
60	581.08	6.93	21021.94	-3.06
61	607.52	7.03	21024.06	-.94
62	625.55	6.75	21026.62	1.62
63	658.08	6.93	21023.98	-1.02
64	678.55	7.19	21024.49	-.51
65	685.76	7.09	21024.59	-.41
66	689.27	5.68	21025.00	.00
67	717.98	3.10	21025.04	.04

68	734.00	2.23	21025.47	.47
69	758.65	2.57	21025.29	.29
70	780.87	.83	21025.23	.23
71	818.15	-1.69	21027.24	2.24
72	859.99	-3.01	21029.08	4.08
73	899.84	-4.11	21028.34	3.34
74	945.26	-4.21	21030.04	5.04
75	980.99	-2.29	21030.47	5.47
76	1050.20	-4.32	21027.20	2.20
77	1096.06	-6.49	21029.53	4.53
78	1115.38	-7.81	21029.75	4.75
79	1213.16	-7.97	21021.71	-3.29
80	1263.15	-9.16	21023.96	-1.04
81	1292.78	-10.32	21025.01	.01
82	1315.28	-10.84	21031.26	6.26
83	1397.57	-12.53	21028.97	3.97
84	1469.04	-13.63	21026.78	1.78
85	1531.88	-14.72	21027.70	2.70
86	1578.23	-15.72	21026.77	1.77
87	1673.70	-17.48	21027.80	2.80
88	1763.59	-18.91	21026.45	1.45
89	1847.08	-20.30	21026.82	1.82
90	1891.42	-21.37	21029.81	4.81
91	1953.87	-22.45	21028.76	3.76
92	2145.95	-23.74	21026.79	1.79
93	2267.04	-25.47	21027.58	2.58
94	2444.67	-26.43	21024.47	-.53
95	2502.34	-27.08	21028.56	3.56
96	2723.82	-29.11	21028.31	3.31
97	2966.50	-30.40	21032.49	7.49

Table A12
Profile AI-16 Data Listing

LOCAL PROFILE SURVEY DATE TIME POINTS UNITS
AI 16 4 841005 940 66 FT

	Y	Z	X	OFF LINE
1	-332.98	.85	23346.23	1.23
2	-316.28	2.44	23345.57	.57
3	-308.26	1.28	23346.04	1.04
4	-278.38	1.32	23345.59	.59
5	-231.05	1.21	23345.32	.32
6	-191.43	1.37	23345.72	.72
7	-145.82	1.51	23345.39	.39
8	-106.73	2.23	23345.26	.26
9	-78.89	2.24	23345.25	.25
10	-54.03	2.06	23345.24	.24
11	-37.82	2.30	23345.51	.51
12	-.03	3.90	23344.66	-.34
13	.03	5.46	23344.68	-.32
14	61.79	5.72	23342.16	-2.84
15	95.06	4.61	23342.72	-2.28
16	128.45	4.75	23344.91	-.09
17	177.73	4.05	23343.34	-1.66
18	202.36	4.82	23346.57	1.57
19	243.98	5.11	23345.36	-.36
20	286.52	5.22	23344.89	-.11
21	322.00	6.45	23345.65	.65
22	333.21	6.68	23346.96	1.96
23	348.25	5.89	23345.93	.93
24	377.26	5.96	23345.68	.68
25	434.54	6.48	23354.11	9.11
26	489.49	6.87	23353.84	8.84
27	537.34	7.06	23349.68	4.68
28	573.47	7.25	23344.36	-.64
29	576.10	6.99	23347.90	2.90
30	588.36	7.38	23344.36	-.64
31	627.99	4.40	23343.64	-1.36
32	648.78	3.77	23343.31	-1.69
33	667.12	2.33	23342.08	-2.92
34	685.07	.85	23342.10	-2.90
35	720.13	-2.38	23357.21	12.21
36	768.52	-3.93	23353.60	8.60
37	819.62	-5.42	23348.91	3.91
38	839.87	-4.46	23345.74	-.74
39	896.66	-2.75	23343.08	-1.92
40	909.29	-3.19	23342.11	-2.89
41	962.23	-4.51	23339.22	-5.78
42	1001.77	-5.43	23342.06	-2.94
43	1028.10	-6.20	23345.04	-.04
44	1096.56	-7.54	23348.15	3.15
45	1161.89	-9.21	23348.70	3.70
46	1235.11	-10.31	23347.53	2.53
47	1286.43	-11.35	23346.49	1.49
48	1395.68	-12.97	23350.70	5.70
49	1454.04	-13.88	23351.90	6.90
50	1501.56	-15.50	23354.87	9.87
51	1547.91	-16.66	23356.57	11.57
52	1606.82	-17.78	23350.46	5.46
53	1733.87	-19.76	23353.10	8.10
54	1804.39	-20.76	23352.15	7.15
55	1946.07	-21.99	23351.23	6.23
56	2162.09	-23.08	23351.79	6.79
57	2350.15	-24.25	23348.00	3.00
58	2421.58	-24.73	23348.85	3.85
59	2640.99	-25.72	23351.35	6.35
60	2818.66	-26.45	23347.63	2.63
61	2998.39	-28.44	23345.04	-.04
62	3129.11	-29.33	23347.20	2.20
63	3192.88	-29.95	23350.37	5.37
64	3327.36	-29.62	23356.79	11.79
65	3522.99	-30.22	23357.19	12.19
66	3707.10	-31.55	23358.57	13.57

Table A13

Profile AI-18 Data Listing

LOCAL PROFILE SURVEY DATE TIME POINTS UNITS
 AI 18 4 841005 1100 77 FT

	Y	Z	X	OFF LINE
1	-825.12	.79	26303.48	-21.52
2	-730.29	.98	26305.54	-19.46
3	-631.69	1.16	26307.74	-17.26
4	-574.89	.68	26309.19	-15.81
5	-485.24	1.26	26309.67	-15.33
6	-418.58	1.36	26311.52	-13.48
7	-370.59	1.45	26309.69	-15.31
8	-312.70	1.54	26316.80	-8.20
9	-274.51	1.53	26322.04	-2.96
10	-233.20	1.82	26320.56	-4.44
11	-189.30	1.88	26322.14	-2.86
12	-141.77	2.09	26321.32	-3.68
13	-107.26	2.38	26322.64	-2.36
14	-74.99	2.83	26316.97	-8.03
15	-30.33	5.20	26321.79	-3.21
16	-.13	4.74	26324.88	-.12
17	48.00	5.42	26327.09	2.09
18	75.83	7.01	26327.35	2.35
19	85.09	9.47	26326.78	1.78
20	99.64	9.45	26327.03	2.03
21	121.78	7.66	26327.17	2.17
22	146.38	7.62	26326.86	1.86
23	173.44	8.69	26325.12	.12
24	198.46	6.93	26323.23	-1.77
25	226.14	6.56	26321.59	-3.41
26	255.13	7.67	26324.00	-1.00
27	282.67	7.28	26320.27	-4.73
28	305.46	7.81	26323.11	-1.89
29	328.69	9.27	26324.35	-.65
30	350.44	10.85	26325.25	.25
31	366.37	9.44	26325.52	.52
32	384.09	9.76	26324.83	-.17
33	403.64	11.91	26325.06	.06
34	420.69	9.34	26325.05	.05
35	436.51	7.85	26324.71	-.29
36	463.53	7.61	26324.44	-.56
37	499.30	4.27	26325.13	.13
38	523.36	3.44	26327.25	2.25
39	559.80	.66	26327.16	2.16
40	581.52	-1.75	26324.40	-.60
41	585.75	-2.22	26325.33	.33
42	587.92	-2.40	26325.16	.16
43	588.96	-2.39	26321.47	-3.53
44	592.27	-2.62	26327.27	2.27
45	606.77	-2.87	26327.19	2.19
46	655.05	-3.80	26334.51	9.51
47	677.39	-4.43	26335.71	10.71
48	699.89	-3.68	26333.80	8.80
49	700.76	-3.55	26332.65	7.65
50	701.52	-3.51	26332.26	7.26
51	719.59	-2.07	26326.55	1.55
52	781.29	-3.78	26329.32	4.32
53	836.86	-5.71	26327.27	2.27
54	889.49	-6.99	26327.89	-.89
55	920.68	-7.59	26327.23	2.23
56	1001.61	-9.25	26329.08	4.08
57	1095.65	-11.15	26327.43	2.43
58	1159.67	-12.49	26325.90	.90
59	1244.40	-13.97	26324.49	-.51
60	1364.32	-14.89	26325.11	.11
61	1469.48	-16.17	26328.10	3.10
62	1567.06	-17.24	26325.79	.79
63	1648.10	-18.16	26326.56	1.56
64	1720.99	-19.09	26328.05	3.05
65	1857.16	-21.39	26326.35	1.35
66	1927.48	-21.95	26329.19	4.19
67	1995.01	-22.33	26328.66	3.66

68	2102.051	-21.850	26326.540
69	2250.971	-22.861	26326.221
70	2370.732	-23.740	26322.809
71	2519.869	-24.790	26318.629
72	2708.310	-25.919	26306.969
73	2826.768	-26.680	26308.711
74	2979.902	-27.569	26305.299
75	3159.902	-28.251	26334.312
76	3242.730	-29.780	26344.492
77	3349.072	-30.919	26338.971

Table A14
Profile AI-20 Data Listing

LOCAL	PROFILE	SURVEY	DATE	TIME	POINTS	UNITS				
A1	20	4	841005	1240	83	FT				
	Y	Z	X	OFF	LINE					
1	-677.01	.79	28741.09	1.09		68	1565.44	-16.34	28736.48	-3.52
2	-624.25	.61	28738.69	-1.31		69	1636.92	-17.45	28735.37	-4.63
3	-622.85	.68	28739.86	-.14		70	1703.18	-18.32	28732.99	-7.01
4	-524.09	.73	28740.84	.84		71	1799.39	-19.64	28735.83	-4.17
5	-482.71	.83	28739.43	-.57		72	1869.93	-21.22	28738.68	-1.32
6	-429.85	.57	28741.64	1.64		73	1950.30	-19.76	28740.48	.48
7	-398.15	.63	28744.44	4.44		74	2051.79	-20.56	28742.75	2.75
8	-356.65	.95	28742.02	2.02		75	2153.54	-21.57	28747.75	7.75
9	-313.58	.85	28742.66	2.66		76	2257.44	-22.71	28768.63	28.63
10	-282.68	1.03	28743.90	3.90		77	2377.73	-23.87	28765.39	25.39
11	-255.72	1.30	28742.97	2.97		78	2482.39	-24.85	28766.87	26.87
12	-251.44	-.18	28744.25	4.25		79	2623.76	-26.32	28771.78	31.78
13	-243.99	-.56	28746.41	6.41		80	2780.27	-27.69	28760.84	20.84
14	-224.32	-.98	28744.72	4.72		81	2926.51	-28.89	28767.39	27.39
15	-205.63	.58	28743.64	3.64		82	3158.94	-30.41	28753.62	13.62
16	-196.22	1.64	28742.00	2.00		83	3283.29	-29.67	28756.65	16.65
17	-180.17	2.78	28741.69	1.69						
18	-146.34	3.10	28740.76	.76						
19	-93.93	3.47	28740.67	.67						
20	-54.24	3.40	28744.01	4.01						
21	-14.20	5.88	28739.99	-.01						
22	12.52	3.83	28742.07	2.07						
23	57.41	4.08	28742.43	2.43						
24	92.73	4.18	28740.99	.99						
25	140.25	5.04	28741.58	1.58						
26	170.87	4.61	28741.67	1.67						
27	205.83	5.58	28741.28	1.28						
28	240.35	5.29	28741.29	1.29						
29	277.27	5.52	28740.28	.28						
30	305.08	6.06	28740.90	.90						
31	329.74	5.23	28739.97	-.03						
32	361.16	6.96	28740.00	.00						
33	376.09	5.54	28740.04	.04						
34	396.06	7.49	28739.69	-.31						
35	426.74	5.40	28740.06	.06						
36	444.12	6.83	28740.08	.08						
37	470.47	5.83	28739.77	-.23						
38	502.02	8.75	28739.50	-.50						
39	522.08	7.43	28740.54	.54						
40	529.01	5.88	28740.72	.72						
41	543.13	6.87	28741.73	1.73						
42	565.58	11.78	28740.69	.69						
43	581.09	15.94	28740.00	.00						
44	597.33	11.33	28738.98	-1.02						
45	614.31	8.07	28738.20	-1.80						
46	616.03	8.01	28740.34	.34						
47	637.09	7.33	28741.06	1.06						
48	659.70	4.95	28741.01	1.01						
49	669.23	3.03	28740.94	.94						
50	713.64	3.63	28741.66	1.66						
51	732.62	4.02	28739.90	-.10						
52	749.93	1.68	28737.80	-2.20						
53	759.85	.94	28733.66	-6.34						
54	783.14	-1.53	28733.49	-6.51						
55	813.31	-1.75	28732.39	-7.61						
56	833.84	-2.34	28731.59	-8.41						
57	883.19	-3.33	28730.82	-9.18						
58	944.38	-4.07	28732.21	-7.79						
59	1030.83	-5.08	28730.95	-9.05						
60	1068.21	-5.23	28730.19	-9.81						
61	1128.65	-6.64	28735.29	-4.71						
62	1185.86	-8.24	28736.18	-3.82						
63	1254.95	-10.12	28733.29	-6.71						
64	1308.26	-11.61	28736.87	-3.13						
65	1399.33	-13.35	28736.32	-3.68						
66	1461.73	-14.20	28735.88	-4.12						
67	1507.63	-15.31	28736.08	-3.92						

Table A15
Profile AI-22 Data Listing

LOCAL	PROFILE	SURVEY DATE	TIME	POINTS	UNITS				
AI	22	4	841005	1350	BZ	FT			
	Y	Z	X	OFF	LINE				
1	-775.46	1.94	31869.99	-0.01		68	1570.61	-15.06	31872.60
2	-696.95	1.51	31870.28	-0.28		69	1671.31	-16.56	31870.46
3	-638.29	1.61	31871.49	1.49		70	1795.29	-18.11	31873.15
4	-562.69	1.87	31868.55	-1.45		71	1883.04	-19.30	31871.59
5	-509.92	2.13	31866.80	-3.20		72	1957.23	-20.14	31873.63
6	-439.02	2.62	31866.97	-3.03		73	2115.88	-22.25	31868.94
7	-393.90	2.91	31867.54	-2.46		74	2196.02	-23.18	31865.18
8	-323.64	2.58	31868.32	-1.68		75	2290.54	-24.16	31863.48
9	-273.81	3.17	31869.17	-0.83		76	2399.60	-25.20	31869.04
10	-207.94	3.77	31869.41	-0.59		77	2521.68	-26.31	31860.68
11	-172.54	4.12	31868.92	-1.08		78	2638.67	-27.24	31863.87
12	-108.08	3.42	31869.18	-0.82		79	2739.73	-28.15	31867.24
13	-71.34	4.20	31869.57	-0.43		80	2838.90	-28.67	31862.97
14	-29.20	7.10	31870.34	.34		81	2984.71	-29.86	31853.53
15	-11.58	7.27	31870.00	.00		82	3057.08	-30.22	31856.89
16	.78	6.11	31870.07	.07					
17	21.93	5.56	31869.18	-0.82					
18	55.25	4.95	31868.68	-1.32					
19	88.92	5.76	31868.13	-1.87					
20	139.32	4.58	31876.00	6.00					
21	198.92	4.22	31875.48	5.48					
22	237.49	4.60	31871.88	1.88					
23	254.58	5.56	31871.91	1.91					
24	286.56	6.95	31870.41	.41					
25	294.71	5.79	31870.36	.36					
26	311.79	5.87	31869.96	-0.04					
27	317.01	7.98	31869.91	-0.09					
28	329.12	9.17	31869.45	-0.55					
29	338.33	6.72	31869.54	-0.46					
30	356.72	5.46	31868.75	-1.25					
31	397.52	5.00	31860.95	-9.05					
32	430.45	5.26	31859.90	-10.10					
33	483.01	6.28	31862.30	-7.70					
34	516.38	7.23	31860.75	-9.25					
35	550.68	6.25	31863.54	-6.46					
36	573.51	7.90	31865.19	-4.81					
37	603.15	14.46	31867.64	-2.16					
38	612.96	16.98	31867.82	-2.18					
39	618.28	17.24	31870.46	.46					
40	625.51	17.10	31868.77	-1.23					
41	648.81	16.52	31869.50	-0.50					
42	660.84	9.49	31870.77	.77					
43	660.93	9.67	31870.81	.81					
44	674.21	8.14	31869.64	-0.36					
45	675.70	8.11	31870.90	.90					
46	696.63	5.36	31871.93	1.93					
47	720.51	3.35	31872.59	0.59					
48	743.17	2.43	31871.26	1.26					
49	755.59	2.05	31869.69	-0.31					
50	769.23	2.23	31867.99	-2.01					
51	787.06	.95	31868.10	-1.90					
52	806.14	-0.36	31870.34	.34					
53	814.63	-0.90	31870.47	.47					
54	822.37	-1.20	31870.54	.54					
55	832.71	-1.40	31873.05	3.05					
56	866.23	-2.15	31872.52	2.52					
57	875.46	-1.71	31871.38	1.38					
58	897.23	-1.06	31865.21	-4.79					
59	946.29	-2.30	31869.72	-0.28					
60	1012.73	-4.75	31872.41	2.41					
61	1075.66	-6.01	31871.98	1.98					
62	1136.15	-7.02	31869.80	-0.20					
63	1204.67	-8.22	31868.50	-1.50					
64	1275.04	-9.55	31871.73	1.73					
65	1363.04	-11.52	31872.60	2.60					
66	1370.97	-11.69	31873.40	3.40					
67	1462.13	-13.38	31872.41	2.41					

Table A16
Profile AI-24 Data Listing

LOCAL PROFILE SURVEY DATE TIME POINTS UNITS
A1 24 4 841005 1500 81 FT

Y	Z	X	OFF LINE
1 -2082.60	-2.96	34518.63	-1.37
2 -1969.86	-1.98	34518.11	-1.89
3 -1883.49	.69	34533.74	13.74
4 -1808.94	.93	34528.36	8.36
5 -1702.56	1.11	34529.15	9.15
6 -1594.05	.80	34534.70	14.70
7 -1447.21	.55	34535.43	15.43
8 -1320.58	.57	34527.43	7.43
9 -1211.79	1.31	34529.56	9.56
10 -1124.05	1.93	34528.53	6.53
11 -1045.43	8.45	34514.59	-5.41
12 -965.83	8.75	34512.67	-7.33
13 -883.76	4.12	34510.64	-9.36
14 -768.06	1.07	34504.73	-15.27
15 -733.73	1.47	34525.83	5.83
16 -629.11	2.52	34524.24	4.24
17 -532.07	3.47	34520.75	.75
18 -440.19	2.89	34510.28	-9.72
19 -336.21	3.74	34523.99	3.99
20 -246.41	4.65	34519.50	-5.50
21 -168.17	4.38	34536.92	16.92
22 -125.36	4.71	34529.76	9.76
23 -73.42	4.58	34527.16	7.16
24 -38.55	5.75	34526.74	6.74
25 .51	8.17	34520.02	.02
26 .58	7.65	34520.22	.22
27 52.10	7.34	34517.65	-2.35
28 127.10	5.63	34520.27	.27
29 172.41	6.72	34520.15	.15
30 191.98	10.10	34519.59	-.41
31 248.27	7.95	34520.66	.66
32 299.91	5.13	34520.32	.32
33 342.31	8.86	34520.98	.98
34 365.73	10.02	34522.66	2.66
35 379.05	8.17	34522.39	2.39
36 425.22	8.69	34521.47	1.47
37 437.68	14.95	34522.52	2.52
38 444.46	15.54	34523.42	3.42
39 449.03	14.40	34523.15	3.15
40 458.06	10.40	34522.16	-.16
41 470.18	8.83	34521.65	1.65
42 471.20	9.01	34521.62	1.62
43 493.95	10.75	34521.25	1.25
44 514.04	17.00	34520.21	.21
45 523.08	16.28	34519.86	-.14
46 530.11	12.99	34519.83	-.17
47 540.21	8.95	34519.75	-.25
48 543.00	8.15	34517.98	-2.02
49 555.59	6.10	34521.22	1.22
50 572.59	5.04	34521.43	1.43
51 589.06	4.02	34522.24	2.24
52 611.04	4.42	34520.46	.46
53 629.08	2.32	34520.61	.61
54 637.47	1.93	34520.94	.94
55 650.20	.68	34520.72	.72
56 678.43	-2.21	34520.43	.43
57 709.70	-2.86	34520.33	.33
58 795.02	-3.59	34520.67	.67
59 896.53	-4.75	34523.34	3.34
60 929.48	-5.39	34523.28	3.28
61 1056.67	-7.39	34518.91	-1.09
62 1109.46	-8.66	34516.43	-3.57
63 1164.70	-9.88	34517.96	-2.04
64 1218.10	-11.07	34519.12	-.88
65 1290.92	-12.71	34518.62	-1.38
66 1342.98	-13.69	34522.21	-.21
67 1398.89	-15.40	34523.20	3.20

68 1477.72	-17.22	34521.84	1.84
69 1540.00	-19.29	34521.03	1.03
70 1605.19	-20.76	34525.69	5.69
71 1680.32	-21.23	34529.02	9.02
72 1744.12	-22.72	34525.01	5.01
73 1793.83	-23.26	34521.86	1.86
74 1886.35	-24.76	34522.88	2.88
75 2002.21	-25.54	34532.64	12.64
76 2102.78	-26.34	34530.01	10.01
77 2260.65	-27.16	34530.14	10.14
78 2411.34	-28.16	34531.84	11.84
79 2522.38	-28.92	34532.42	12.42
80 2670.69	-30.47	34523.09	3.09
81 2818.74	-31.47	34516.22	-3.78

Table A17
Profile AI-26 Data Listing

LOCAL AI	PROFILE 26	SURVEY DATE 4 841025	TIME 910	POINTS 100	UNITS F1				
	Y	Z	X	OFF LINE					
1	-2574.66	1.18	37354.27	59.27		68	349.80	6.33	37294.78
2	-2555.32	1.21	37317.06	22.06		69	357.37	6.02	37295.13
3	-2551.62	-1.22	37303.07	8.07		70	368.10	5.87	37294.76
4	-2426.56	-1.79	37271.52	-23.48		71	387.11	6.18	37294.19
5	-2417.12	1.01	37311.68	16.68		72	399.55	6.18	37295.00
6	-2415.63	-1.61	37312.04	17.04		73	415.49	4.71	37295.29
7	-2372.69	-1.62	37290.43	-4.57		74	426.22	3.42	37295.91
8	-2352.68	.70	37275.99	-19.01		75	437.02	2.37	37297.15
9	-2306.35	.80	37273.91	-21.09		76	458.15	1.25	37298.30
10	-2303.71	-1.81	37275.29	-19.71		77	458.73	.96	37304.38
11	-2230.74	-1.57	37284.76	-10.22		78	478.69	.43	37307.75
12	-2228.85	.91	37285.64	-9.36		79	518.10	-2.13	37309.50
13	-2204.22	1.29	37304.65	9.65		80	554.04	-4.48	37310.70
14	-2124.93	1.46	37303.49	8.49		81	645.28	-7.22	37302.82
15	-2049.91	1.14	37288.86	-6.14		82	749.32	-6.03	37299.12
16	-1970.57	1.44	37278.88	-16.12		83	785.64	-3.91	37301.56
17	-1895.25	1.25	37289.24	-5.76		84	846.50	-5.56	37297.97
18	-1817.51	1.00	37287.19	-7.81		85	897.52	-6.85	37299.74
19	-1701.36	.94	37288.30	-6.70		86	1009.40	-9.99	37305.03
20	-1623.28	1.03	37288.88	-6.12		87	1084.75	-11.95	37306.78
21	-1553.22	1.05	37289.48	-5.52		88	1179.67	-14.21	37288.69
22	-1444.43	1.23	37291.97	-3.03		89	1241.36	-15.54	37291.84
23	-1442.60	-.77	37291.51	-3.49		90	1313.69	-17.02	37294.53
24	-1429.33	-.51	37293.36	-1.64		91	1413.98	-18.78	37295.95
25	-1425.17	1.23	37291.98	-3.02		92	1513.92	-20.29	37294.87
26	-1361.96	1.00	37291.19	-3.81		93	1627.70	-21.74	37295.67
27	-1283.28	1.36	37292.15	-2.85		94	1709.78	-22.73	37298.92
28	-1170.51	1.18	37283.66	-11.34		95	1777.91	-23.65	37296.45
29	-1075.55	1.11	37277.07	-17.93		96	1885.92	-25.02	37300.13
30	-1007.96	1.39	37286.64	-8.36		97	2001.92	-26.58	37298.21
31	-911.03	2.00	37305.20	10.20		98	2083.58	-27.64	37297.27
32	-852.16	2.93	37266.18	-28.82		99	2211.13	-28.88	37288.54
33	-795.38	1.73	37328.12	33.12		100	2365.86	-30.13	37286.39
34	-714.21	3.14	37313.33	18.33					
35	-633.08	2.81	37328.97	33.97					
36	-558.46	4.59	37315.91	20.91					
37	-532.67	4.81	37323.05	28.05					
38	-446.30	5.16	37315.95	20.95					
39	-386.59	6.70	37309.21	14.21					
40	-342.73	5.53	37306.31	11.31					
41	-305.15	6.18	37297.86	2.86					
42	-264.65	5.32	37298.34	3.34					
43	-191.73	5.87	37296.67	1.67					
44	-165.14	5.93	37299.47	4.47					
45	-133.17	5.36	37298.83	3.83					
46	-85.22	5.77	37295.15	.15					
47	-61.43	7.28	37297.71	2.71					
48	-45.99	9.58	37303.45	8.45					
49	-14.20	21.93	37286.94	-8.06					
50	.28	11.04	37295.09	.09					
51	16.13	9.95	37291.52	-3.48					
52	26.69	9.07	37290.08	-4.92					
53	38.01	6.11	37290.33	-4.67					
54	75.19	6.65	37292.86	-2.14					
55	111.56	5.69	37297.43	2.43					
56	130.56	5.32	37297.13	2.13					
57	172.83	5.17	37292.51	-2.49					
58	211.71	9.20	37293.49	-1.51					
59	246.88	8.74	37293.32	-1.68					
60	260.63	9.55	37293.51	-1.49					
61	280.90	12.28	37293.31	-1.69					
62	311.82	11.62	37294.55	-.45					
63	322.99	11.34	37295.36	.36					
64	326.11	9.98	37296.44	1.44					
65	327.87	8.55	37294.84	-.16					
66	329.53	8.33	37295.26	.26					
67	335.84	7.67	37294.23	-.77					

Table A18
Profile AI-28 Data Listing

LOCAL PROFILE SURVEY DATE TIME POINTS UNITS
AI 28 4 841025 1100 91 FT

	Y	Z	X	OFF LINE
1	-1010.16	-.62	40085.13	-9.87
2	-1009.31	.92	40083.78	-11.22
3	-926.68	.60	40094.17	-.83
4	-860.00	.86	40101.68	6.68
5	-802.63	1.26	40095.87	-.87
6	-735.61	2.61	40093.16	-1.62
7	-706.25	1.14	40092.82	-2.18
8	-635.66	1.13	40094.63	-.37
9	-540.61	1.37	40093.49	-1.51
10	-366.78	1.61	40089.48	-5.52
11	-324.00	1.84	40096.35	1.35
12	-271.61	1.85	40094.81	-.19
13	-224.87	4.62	40094.72	-.28
14	-204.61	4.66	40091.86	-3.14
15	-173.13	3.98	40093.94	-1.06
16	-135.82	2.75	40097.65	2.65
17	-57.20	5.53	40096.57	1.57
18	-33.55	5.47	40094.69	-.31
19	-.28	4.91	40094.95	-.05
20	8.95	4.86	40094.74	-.26
21	35.18	5.00	40094.15	-.85
22	70.26	6.20	40094.07	-.93
23	97.60	6.31	40094.19	-.81
24	117.72	5.56	40092.89	-2.11
25	138.76	6.68	40092.67	-2.33
26	164.98	6.55	40093.17	-1.83
27	180.99	5.70	40093.98	-1.02
28	203.52	7.00	40094.12	-.88
29	224.85	6.64	40085.59	-9.41
30	241.72	5.70	40087.03	-7.97
31	257.40	6.10	40085.48	-9.52
32	282.14	6.66	40088.61	-6.39
33	305.96	5.66	40090.37	-4.63
34	350.17	5.55	40090.84	-4.16
35	380.24	6.35	40091.19	-3.81
36	421.42	6.12	40088.50	-6.50
37	475.01	7.40	40090.67	-4.33
38	492.07	7.53	40090.24	-4.76
39	531.94	4.94	40091.83	-3.17
40	569.62	8.37	40096.50	1.50
41	608.23	11.61	40096.09	1.09
42	628.01	12.31	40095.76	-.76
43	656.42	16.83	40096.00	1.00
44	666.52	15.28	40096.50	1.50
45	676.55	16.63	40095.84	.84
46	692.88	18.54	40095.07	.07
47	703.85	17.41	40095.07	.07
48	705.61	17.01	40094.50	-.50
49	713.41	16.67	40095.06	.06
50	713.59	16.25	40094.16	-.84
51	716.33	14.32	40093.58	-1.42
52	719.62	12.78	40094.31	-.69
53	725.44	10.22	40093.69	-1.31
54	727.60	8.89	40093.45	-1.55
55	727.80	10.00	40093.70	-1.30
56	741.77	7.04	40092.32	-2.68
57	769.10	6.17	40091.71	-3.29
58	790.08	6.10	40090.79	-4.21
59	814.84	3.89	40088.33	-6.67
60	835.97	2.13	40089.82	-5.18
61	860.03	.81	40095.43	.43
62	874.67	.00	40095.82	.82
63	904.02	-1.61	40094.33	-.67
64	928.42	-3.62	40094.80	-.20
65	950.88	-4.83	40094.11	-.85
66	975.65	-5.61	40093.68	-1.32
67	1022.67	-6.39	40092.45	-2.51

68	1055.23	-6.60	40091.02	-3.98
69	1083.79	-6.86	40090.50	-4.50
70	1179.28	-6.65	40096.02	1.02
71	1226.68	-4.50	40092.41	-2.59
72	1302.69	-7.19	40092.21	-2.79
73	1315.79	-7.58	40086.06	-8.94
74	1370.41	-9.25	40098.30	3.30
75	1450.66	-11.85	40092.53	-2.47
76	1512.16	-13.51	40094.27	-.73
77	1575.35	-15.54	40092.24	-2.76
78	1664.78	-17.94	40086.80	-8.20
79	1733.72	-19.50	40107.87	12.87
80	1820.73	-21.33	40102.10	7.10
81	1895.88	-23.32	40100.10	5.10
82	1944.64	-24.13	40098.75	3.75
83	2025.57	-25.21	40098.33	3.33
84	2139.82	-26.32	40097.45	2.45
85	2254.80	-27.11	40093.26	-1.74
86	2377.08	-28.02	40099.76	4.76
87	2536.06	-29.13	40097.85	2.85
88	2757.21	-30.48	40088.41	-6.59
89	2909.26	-31.26	40095.91	.91
90	3063.53	-31.92	40097.20	2.20
91	3191.75	-32.35	40105.47	10.47

Table A19
Profile AI-30 Data Listing

LOCAL PROFILE SURVEY DATE TIME POINTS UNITS
AI 30 4 841025 1220 109 FT

LOCAL	PROFILE	SURVEY DATE	TIME	POINTS	UNITS				
A1	30	4	841025	1220	109	FT			
	Y	Z	X	OFF LINE					
1	-1741.75	-.52	42660.07	-4.93	68	937.37	12.63	42663.73	-1.27
2	-1741.46	.97	42660.08	-4.92	69	949.14	10.36	42662.20	-2.80
3	-1656.38	.98	42660.33	-4.67	70	953.55	9.85	42660.72	-4.28
4	-1655.44	-.61	42660.63	-4.37	71	964.46	7.64	42661.98	-3.02
5	-1624.37	-1.08	42658.89	-6.11	72	974.62	6.40	42656.03	-8.97
6	-1623.55	.60	42658.94	-6.06	73	991.16	5.87	42655.75	-9.25
7	-1514.20	.69	42657.76	-7.24	74	1012.35	6.05	42657.06	-7.94
8	-1409.19	.97	42660.39	-4.61	75	1035.29	5.56	42659.29	-5.71
9	-1287.14	.60	42658.72	-6.28	76	1059.88	4.13	42660.22	-4.78
10	-1186.22	.71	42661.66	-3.34	77	1083.41	2.20	42658.72	-6.28
11	-1076.45	.93	42659.25	-5.75	78	1100.42	.94	42660.22	-4.78
12	-997.43	1.15	42662.46	-2.54	79	1116.87	-.10	42659.64	-5.36
13	-968.35	1.95	42663.05	-1.95	80	1132.22	-1.02	42659.55	-5.45
14	-951.03	2.28	42662.95	-2.05	81	1146.26	-1.77	42672.12	7.12
15	-936.42	1.36	42662.52	-2.48	82	1194.21	-4.70	42681.74	16.74
16	-898.10	1.19	42662.40	-2.60	83	1232.56	-6.26	42668.35	3.35
17	-850.56	1.70	42662.68	-2.32	84	1258.83	-7.06	42659.23	-5.77
18	-779.33	1.09	42663.26	-1.74	85	1281.23	-7.59	42653.29	-11.71
19	-687.04	1.18	42660.39	-4.61	86	1331.19	-8.15	42656.06	-8.94
20	-582.05	1.87	42662.17	-2.83	87	1410.21	-6.38	42666.09	1.09
21	-509.78	4.36	42662.50	-2.50	88	1446.83	-5.14	42671.80	6.80
22	-457.28	3.64	42663.50	-1.50	89	1480.63	-5.43	42674.47	9.47
23	-397.26	2.94	42661.98	-3.02	90	1503.41	-6.25	42677.30	12.30
24	-385.31	1.96	42664.26	-.74	91	1545.51	-7.60	42676.84	11.84
25	-357.88	1.56	42665.69	.69	92	1613.63	-9.62	42676.81	11.81
26	-289.64	1.98	42663.96	-1.04	93	1649.77	-10.59	42679.22	14.22
27	-245.90	2.27	42667.63	2.63	94	1722.33	-12.95	42672.31	7.31
28	-186.93	3.76	42665.72	.72	95	1777.44	-14.46	42673.25	8.25
29	-160.54	4.16	42664.84	-.16	96	1830.42	-15.80	42678.85	13.85
30	-144.09	3.31	42664.15	-.85	97	1898.93	-17.55	42671.21	6.21
31	-120.47	3.20	42662.25	-2.75	98	1992.32	-19.74	42671.51	6.51
32	-74.07	2.72	42674.47	9.47	99	2061.63	-21.37	42664.73	-.27
33	-12.31	4.22	42663.40	-1.60	100	2122.20	-22.72	42665.92	.92
34	-.03	4.66	42664.84	-.16	101	2202.80	-24.98	42667.99	2.99
35	23.18	4.70	42667.04	2.04	102	2289.10	-26.06	42682.67	17.67
36	40.65	7.17	42664.96	-.02	103	2341.98	-26.51	42685.02	20.02
37	77.83	4.35	42664.13	-.87	104	2456.82	-26.97	42656.04	-8.96
38	127.16	5.59	42663.02	-1.98	105	2551.50	-27.60	42660.56	-4.44
39	171.25	6.07	42661.15	-3.85	106	2669.67	-28.41	42663.55	-1.45
40	234.62	5.36	42663.75	-1.25	107	2767.14	-29.03	42668.86	3.86
41	250.37	8.13	42663.48	-1.52	108	2848.66	-29.51	42672.65	7.65
42	259.77	6.78	42661.56	-3.44	109	3059.48	-30.70	42665.88	.88
43	281.01	7.63	42661.71	-3.29					
44	319.19	4.65	42664.99	-.01					
45	365.51	5.63	42666.28	1.28					
46	414.04	4.01	42668.69	3.69					
47	463.13	4.08	42666.47	1.47					
48	528.55	7.53	42662.44	-2.56					
49	573.67	7.52	42664.60	-.40					
50	602.09	7.39	42664.04	-.96					
51	617.56	7.10	42665.45	.45					
52	643.26	4.66	42664.81	-.19					
53	690.35	4.71	42664.99	-.01					
54	717.96	4.55	42664.41	-.59					
55	748.65	9.36	42664.46	-.54					
56	772.32	12.41	42660.74	-4.26					
57	790.61	14.50	42662.90	-2.10					
58	811.25	15.22	42664.86	-.14					
59	832.93	14.97	42665.17	.17					
60	851.44	15.04	42664.92	-.08					
61	867.99	16.05	42664.76	-.24					
62	891.79	18.69	42665.55	.55					
63	907.50	18.90	42664.80	-.20					
64	913.45	18.26	42665.09	.09					
65	917.45	17.54	42663.79	-1.21					
66	923.66	16.35	42664.68	-.32					
67	926.74	14.50	42662.99	-2.01					

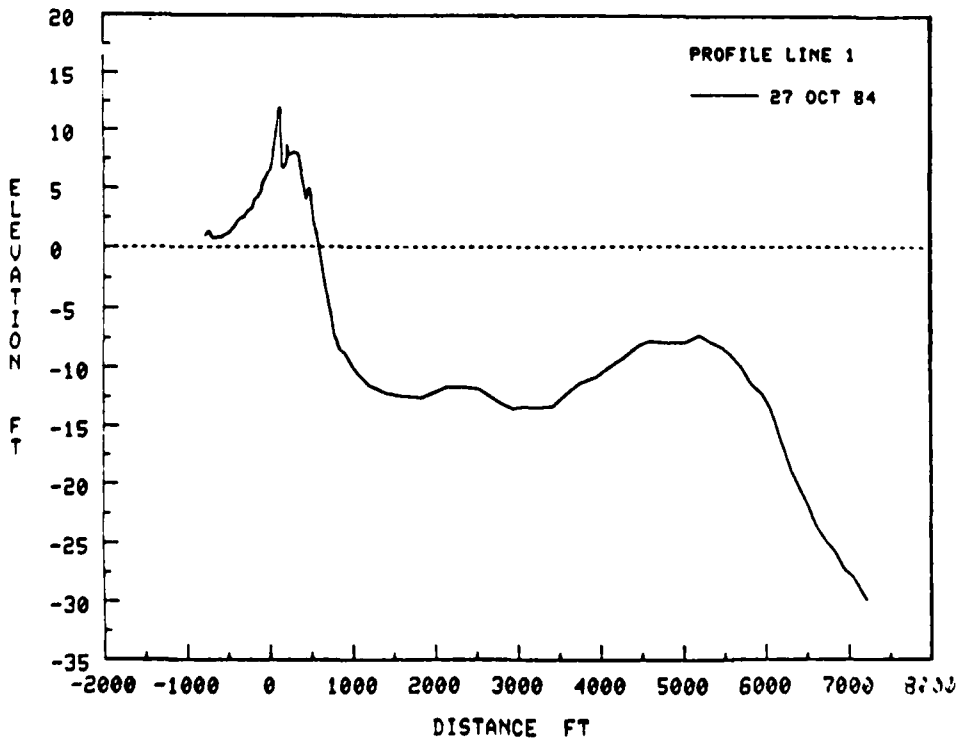
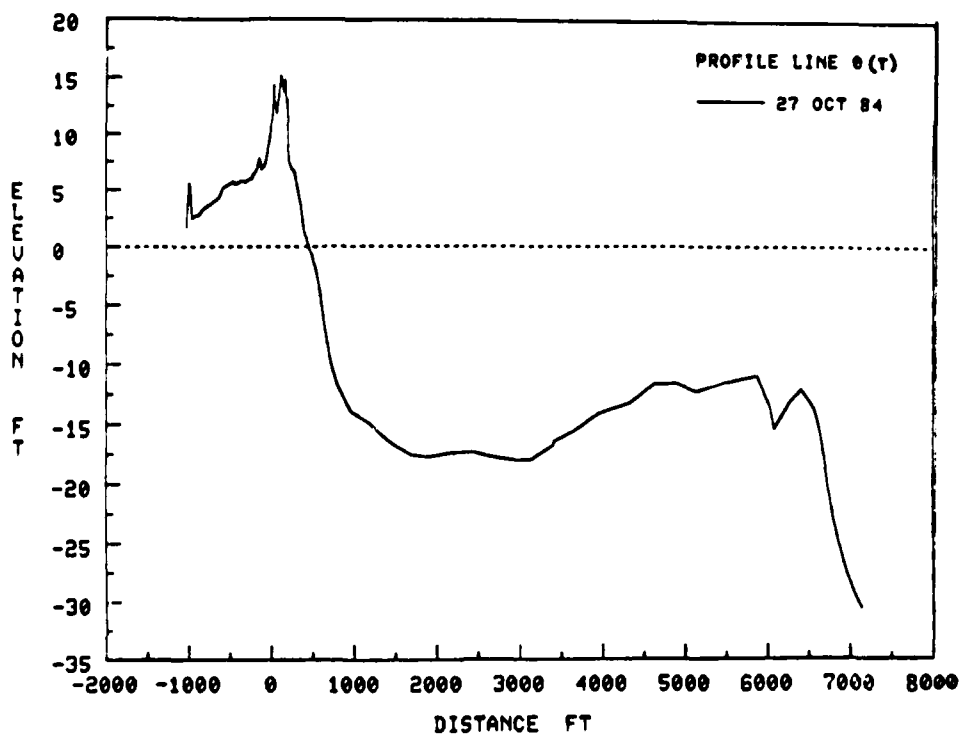
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Profile AI-32 Data Listing

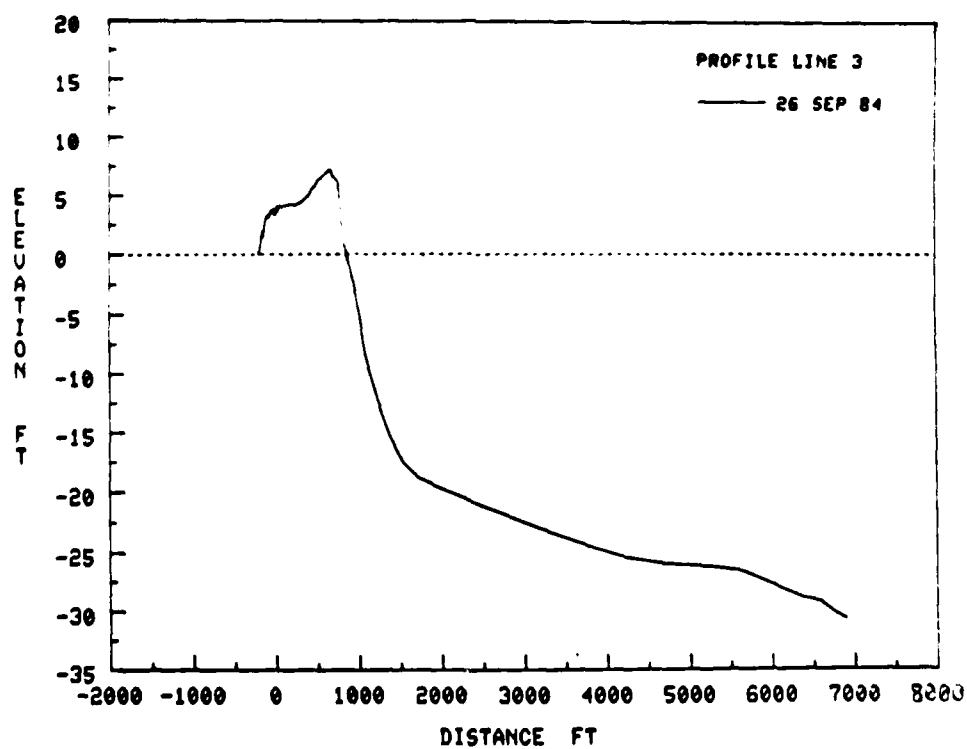
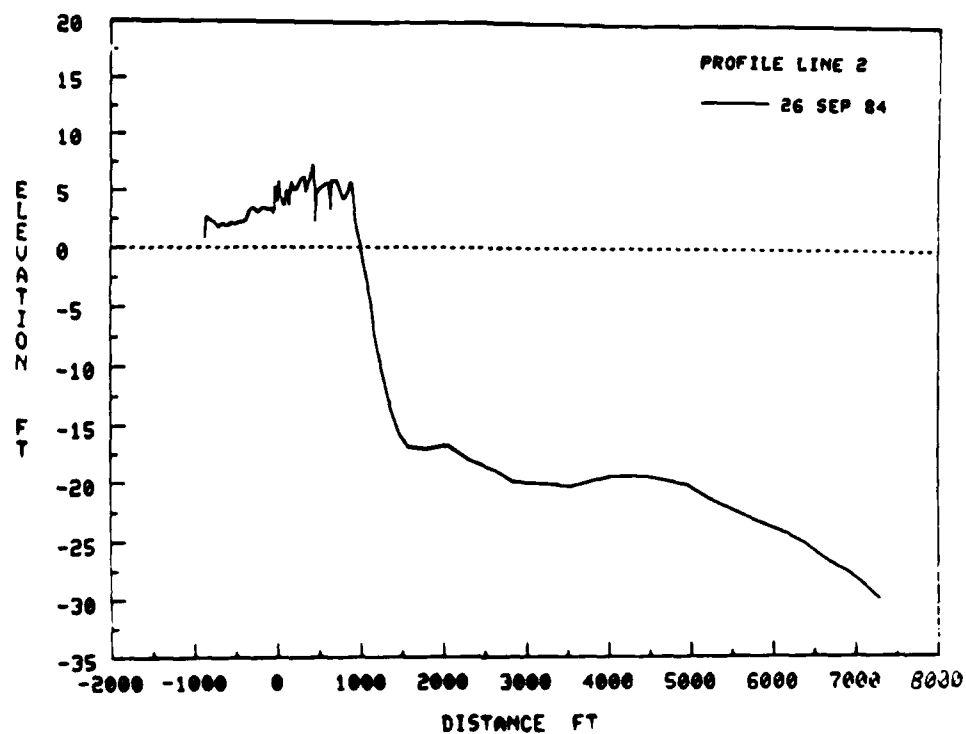
LOCAL PROFILE SURVEY DATE TIME POINTS UNITS
AI 32 4 841025 1330 99 FT

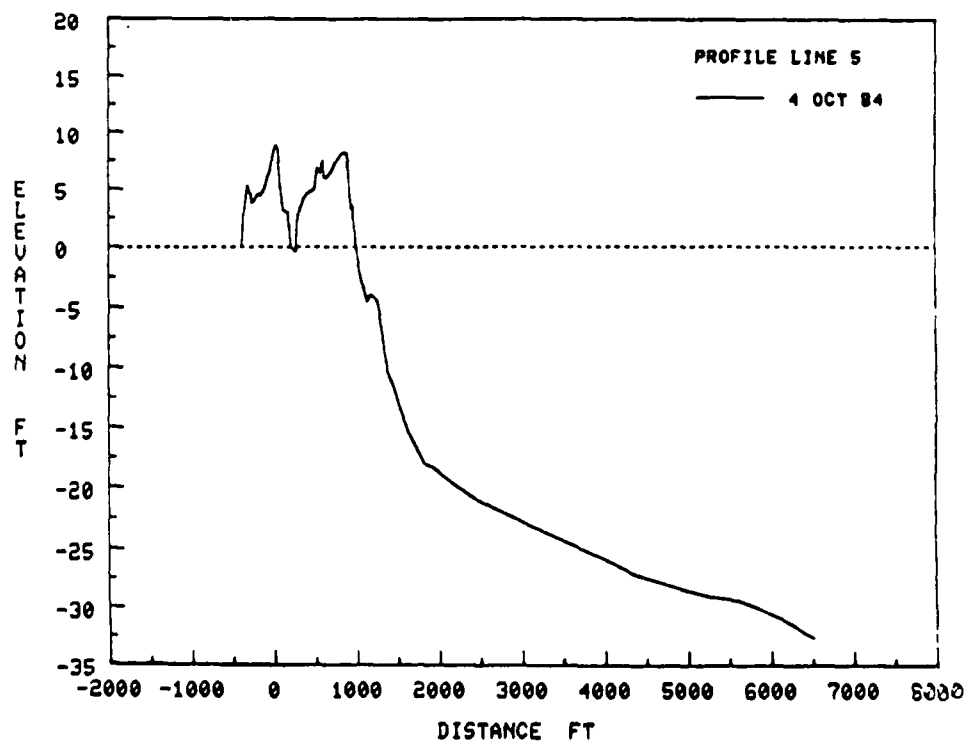
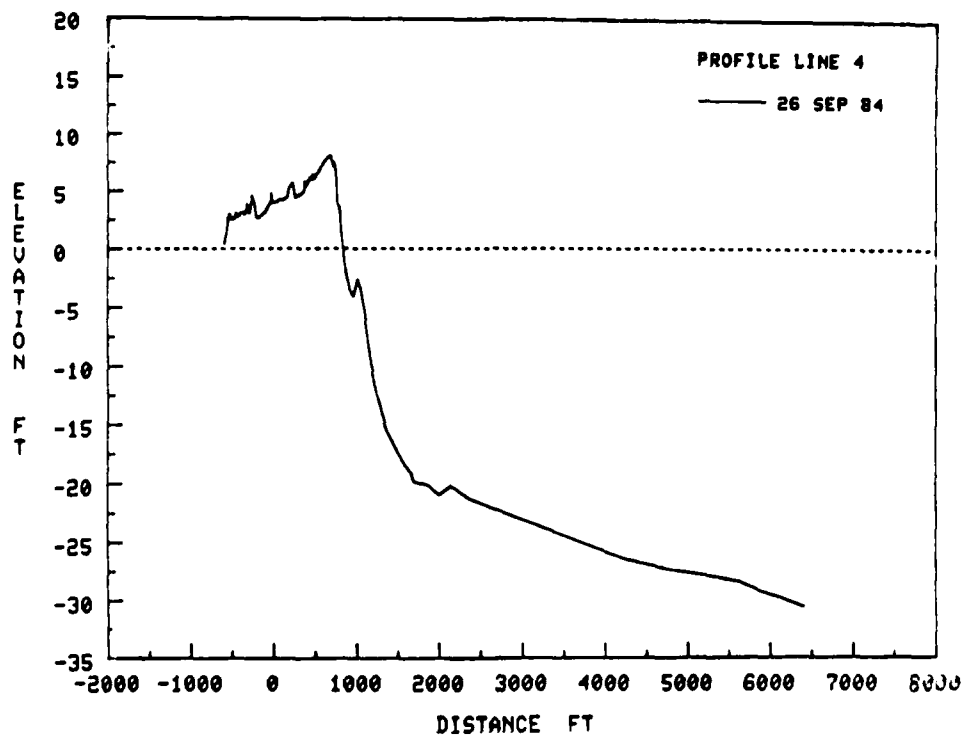
	Y	Z	X	OFF LINE
1	-2000.69	.61	45269.68	-70.32
2	-1819.84	.88	45285.25	-54.75
3	-1758.53	1.72	45284.58	-55.42
4	-1697.91	1.90	45280.93	-59.07
5	-1557.58	-1.23	45285.25	-54.75
6	-1450.28	.37	45291.91	-48.09
7	-1399.28	.55	45294.81	-45.19
8	-1322.02	1.35	45297.31	-42.69
9	-1299.26	2.67	45299.62	-40.38
10	-1242.87	1.12	45297.81	-42.19
11	-1139.94	.87	45299.46	-40.54
12	-1051.02	1.12	45306.38	-33.62
13	-946.84	1.93	45316.01	-23.99
14	-882.07	2.60	45317.15	-22.85
15	-814.10	2.71	45314.36	-25.64
16	-759.21	.87	45308.33	-31.67
17	-688.42	.21	45307.19	-32.81
18	-678.14	.93	45313.97	-26.03
19	-582.90	2.57	45309.03	-30.97
20	-501.74	3.57	45320.96	-19.04
21	-417.30	3.97	45327.67	-12.33
22	-360.23	6.23	45324.07	-15.93
23	-335.99	3.98	45337.84	-2.16
24	-316.81	4.93	45337.98	-2.02
25	-275.25	3.21	45336.88	-3.12
26	-198.56	3.35	45338.71	-1.29
27	-132.51	2.90	45336.01	-3.99
28	-65.01	2.36	45333.80	-6.20
29	.56	2.99	45340.04	.04
30	26.75	4.44	45340.41	.41
31	59.28	3.74	45342.91	2.91
32	84.39	3.88	45341.55	1.55
33	94.61	2.66	45340.73	.73
34	195.36	2.97	45339.15	-.85
35	241.58	3.67	45340.06	.06
36	291.38	3.46	45340.51	.51
37	334.48	4.12	45342.14	2.14
38	363.37	4.32	45340.81	.81
39	393.31	6.09	45341.42	1.42
40	418.70	4.40	45334.76	-5.24
41	449.66	5.34	45337.96	-2.04
42	470.30	4.95	45338.81	-1.19
43	506.95	6.90	45338.29	-1.71
44	517.27	7.55	45337.70	-2.30
45	564.62	5.68	45338.15	-1.85
46	617.34	12.24	45338.60	-1.40
47	643.41	12.84	45339.25	-.75
48	663.06	14.72	45338.93	-1.07
49	680.42	12.56	45339.38	-.62
50	714.42	12.00	45339.45	-.55
51	722.24	10.77	45342.97	2.97
52	739.81	8.50	45338.85	-1.15
53	744.62	8.42	45343.46	3.46
54	756.13	7.02	45339.19	-.81
55	766.70	6.51	45339.44	-.56
56	784.20	6.20	45338.51	-1.49
57	809.36	6.35	45339.53	-.47
58	828.73	5.53	45338.90	-1.10
59	859.55	2.79	45338.49	-1.51
60	887.17	.58	45338.02	-1.98
61	897.66	.17	45337.07	-2.93
62	928.02	-1.92	45338.53	-1.47
63	959.21	-3.99	45339.10	-.90
64	988.81	-5.20	45338.88	-1.12
65	1019.26	-6.16	45337.61	-2.19
66	1050.65	-6.81	45335.67	-4.33
67	1081.96	-7.40	45334.92	-5.08

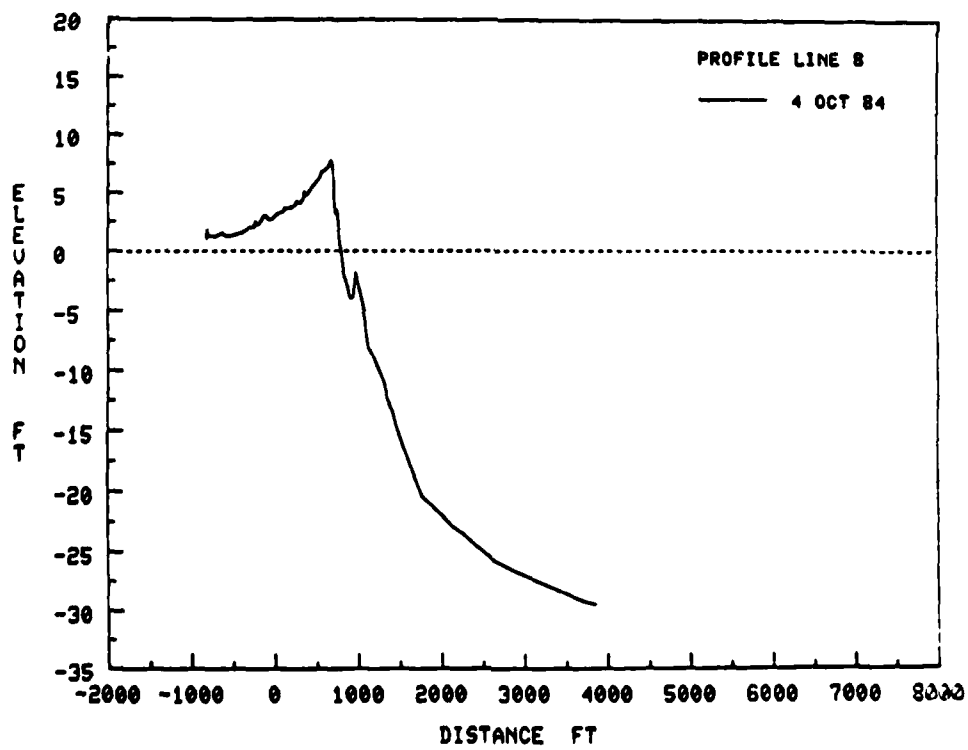
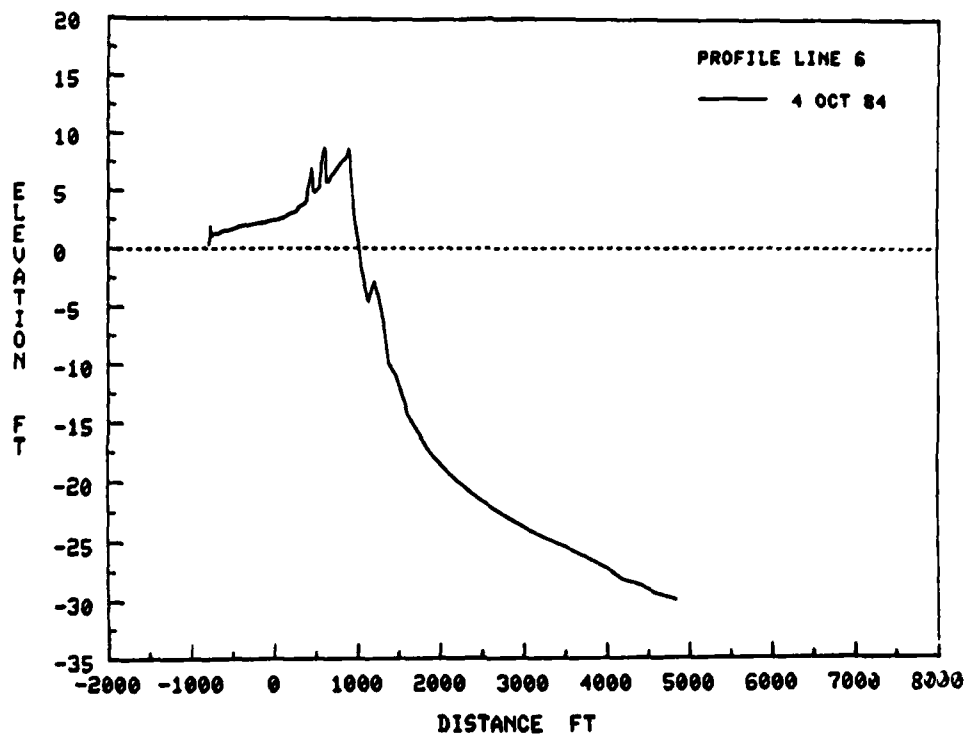
68	1106.72	-7.51	45334.76	-5.24
69	1134.22	-7.62	45335.01	-4.99
70	1158.08	-7.67	45335.83	-4.17
71	1197.31	-7.33	45337.33	-2.67
72	1211.70	-6.48	45337.46	-2.54
73	1246.62	-4.79	45340.32	.32
74	1283.36	-5.87	45340.08	.08
75	1317.25	-7.06	45338.76	-1.24
76	1359.19	-8.21	45337.14	-2.86
77	1439.81	-10.57	45338.73	-1.27
78	1464.33	-11.22	45337.65	-2.35
79	1496.36	-12.35	45336.17	-3.83
80	1550.31	-13.80	45346.35	6.35
81	1610.38	-14.42	45341.55	1.55
82	1657.55	-16.68	45348.60	8.60
83	1665.60	-16.99	45345.09	5.09
84	1735.53	-18.45	45346.79	6.79
85	1774.95	-19.20	45352.45	12.45
86	1820.75	-20.15	45347.77	7.77
87	1895.90	-21.59	45348.76	6.76
88	1970.16	-22.98	45348.62	8.62
89	2055.61	-24.63	45338.74	-1.26
90	2117.01	-26.47	45330.43	-9.57
91	2198.01	-27.17	45347.16	7.16
92	2236.26	-27.68	45351.76	11.76
93	2318.01	-29.15	45352.47	12.47
94	2539.78	-31.09	45352.95	12.95
95	2770.90	-32.05	45356.81	16.81
96	2888.93	-32.51	45363.05	23.05
97	3008.38	-33.16	45389.02	49.02
98	3165.43	-33.84	45383.91	43.91
99	3264.40	-34.17	45303.66	-36.34

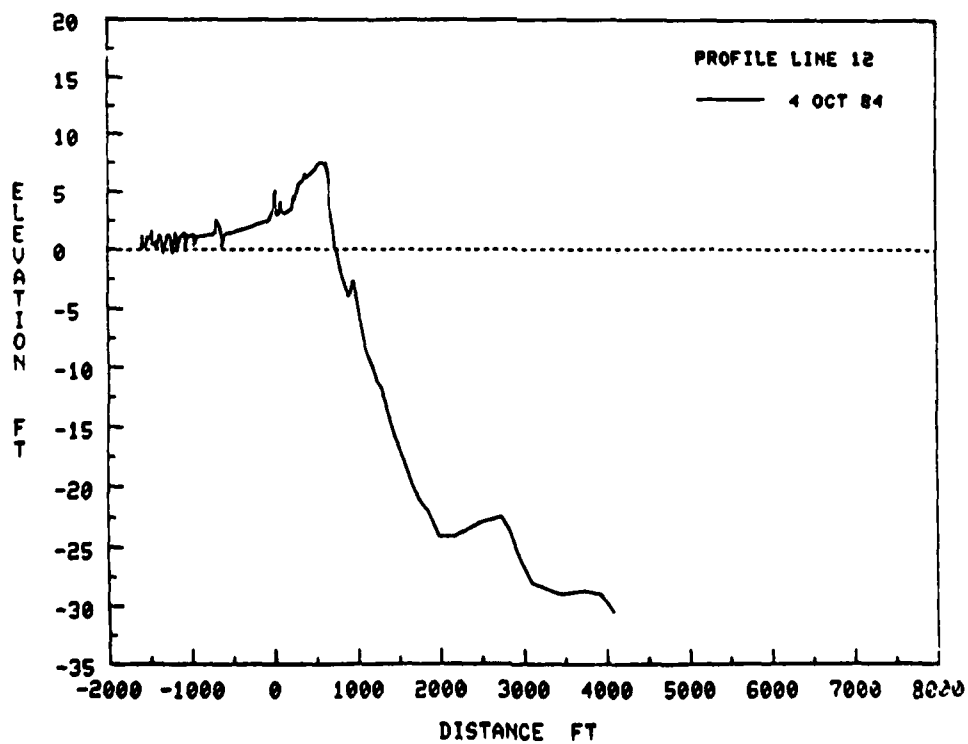
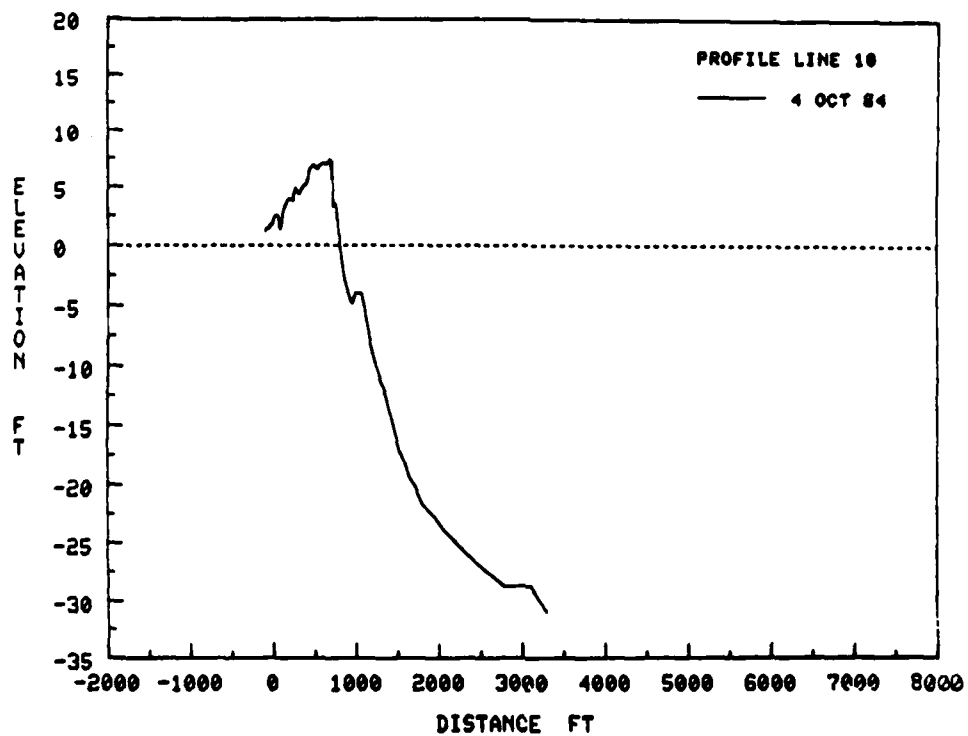
APPENDIX B
PROFILE DATA PLOTS

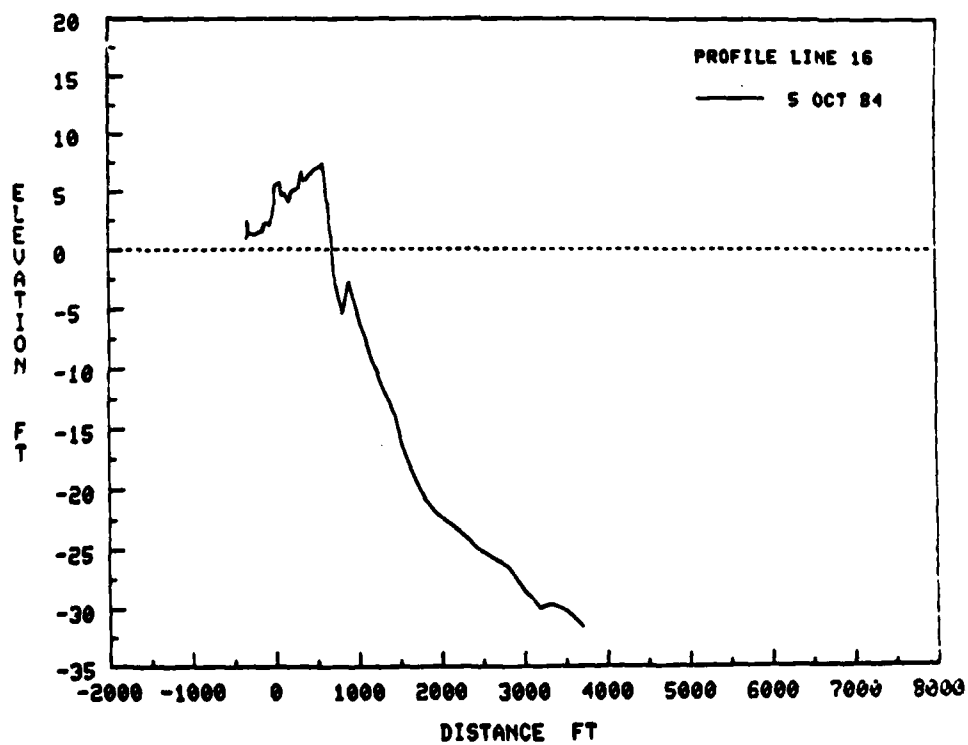
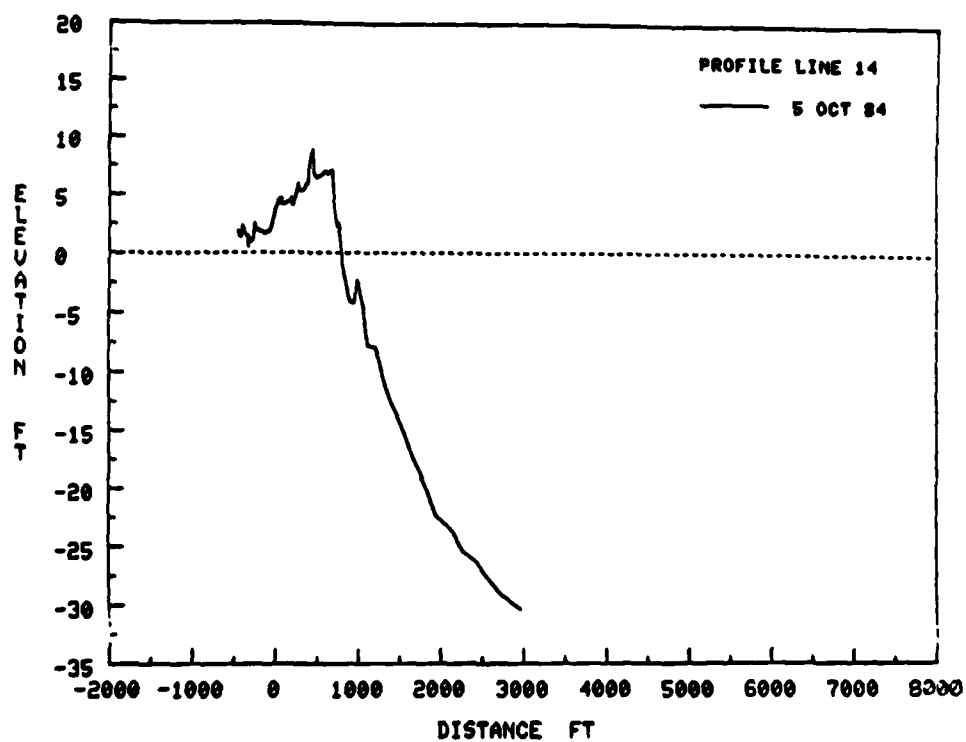


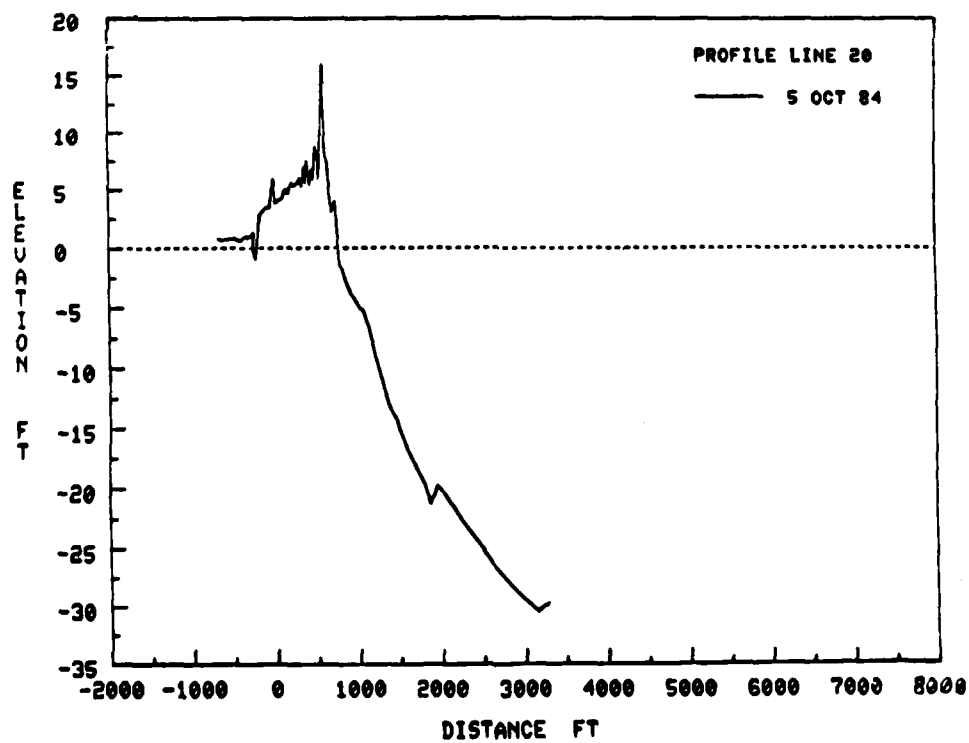
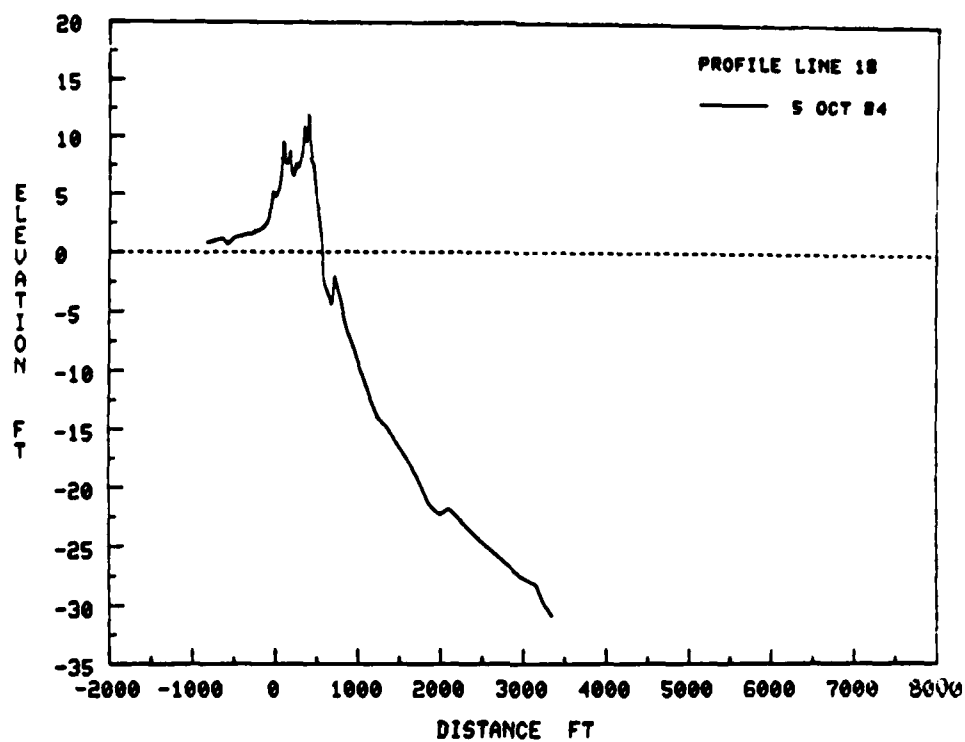


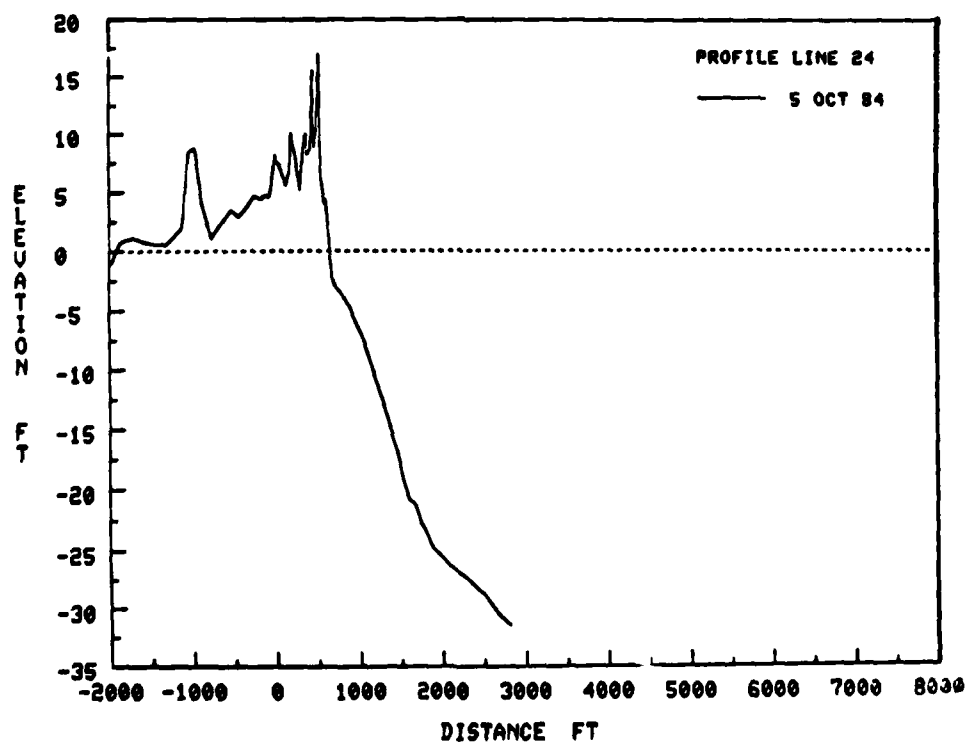
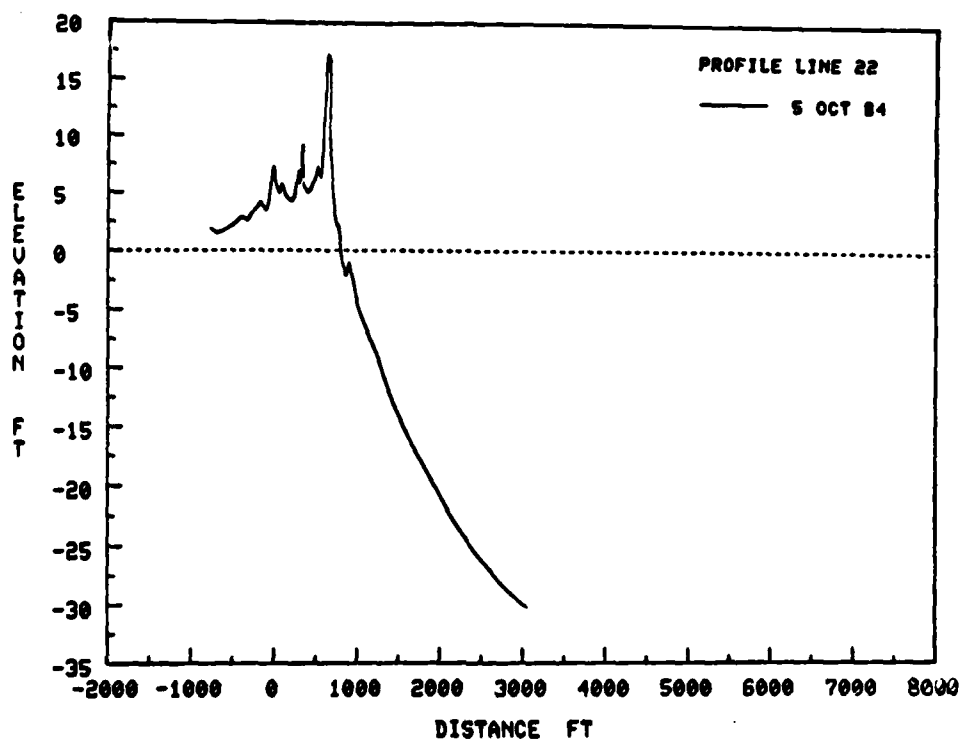


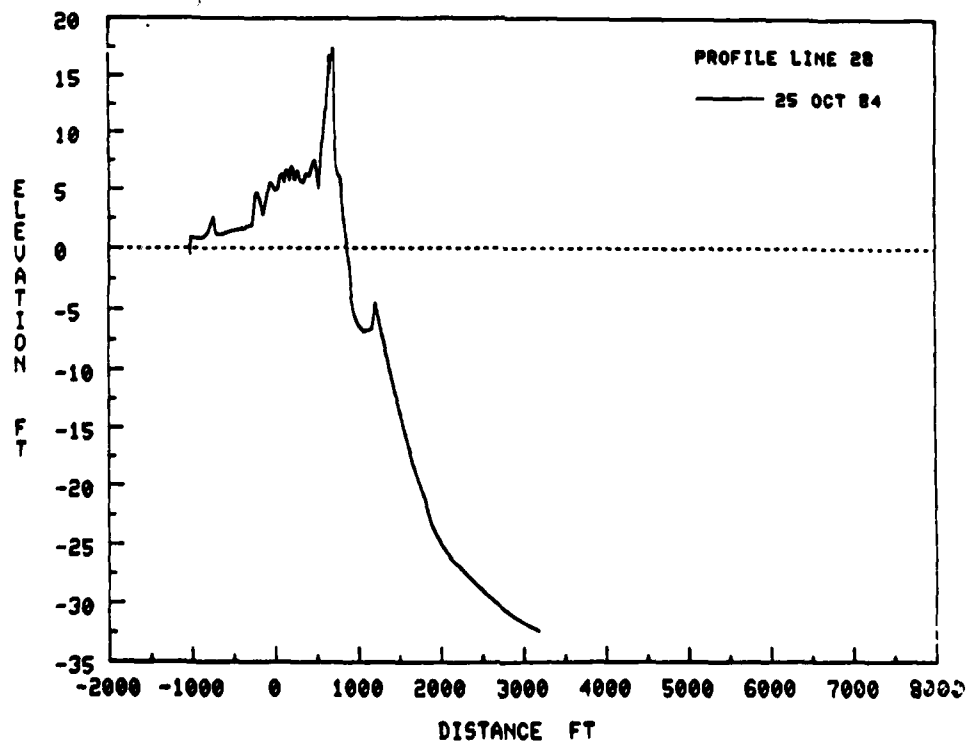
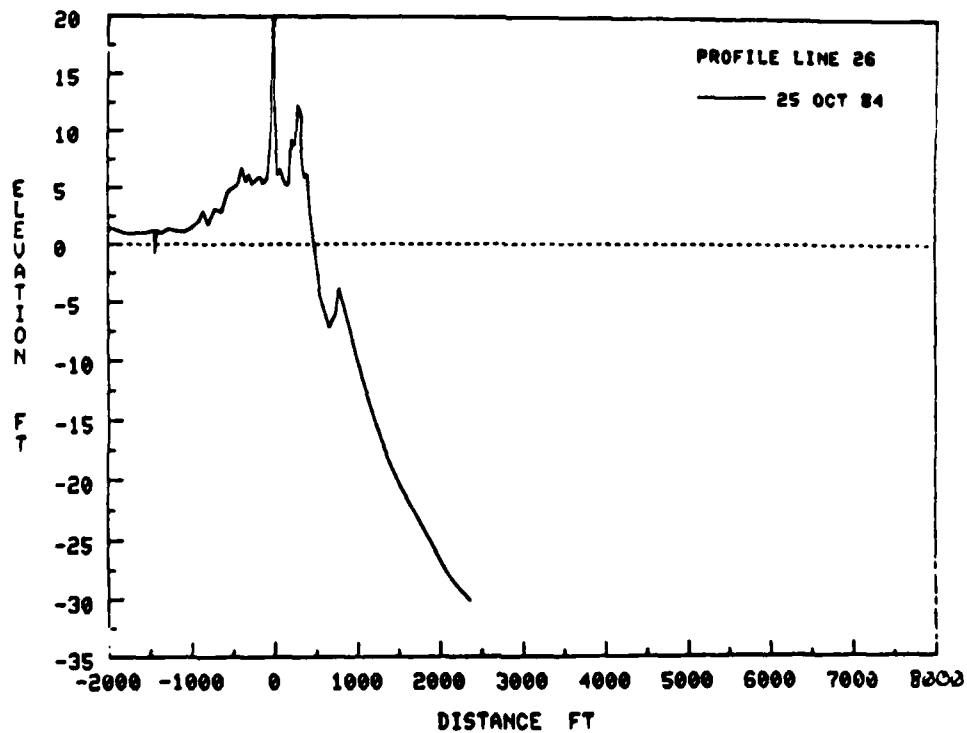


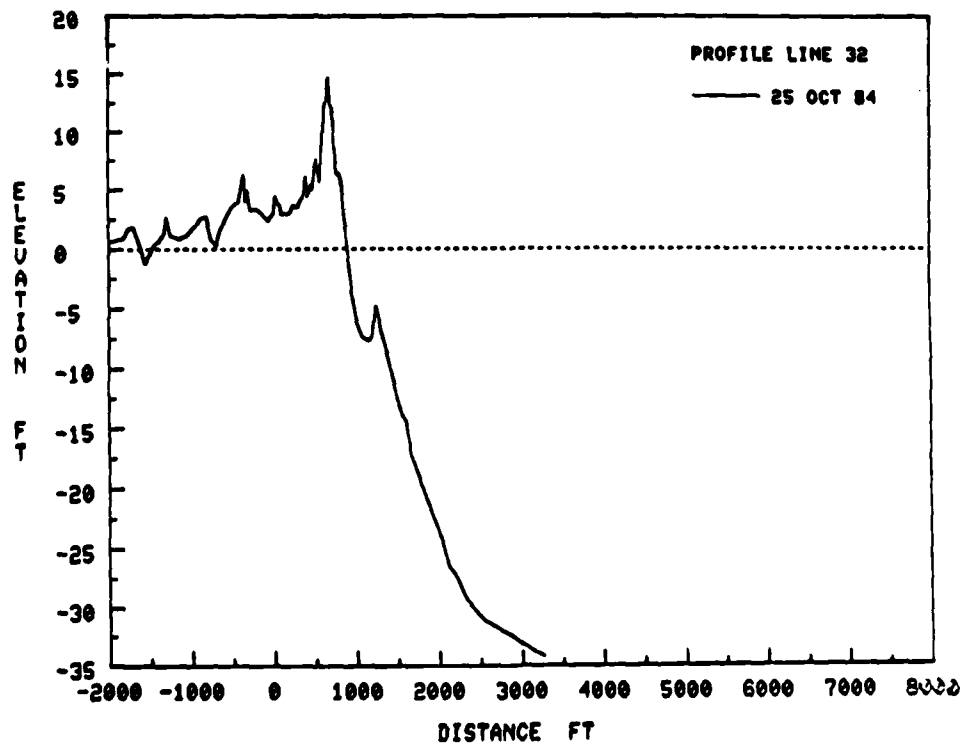
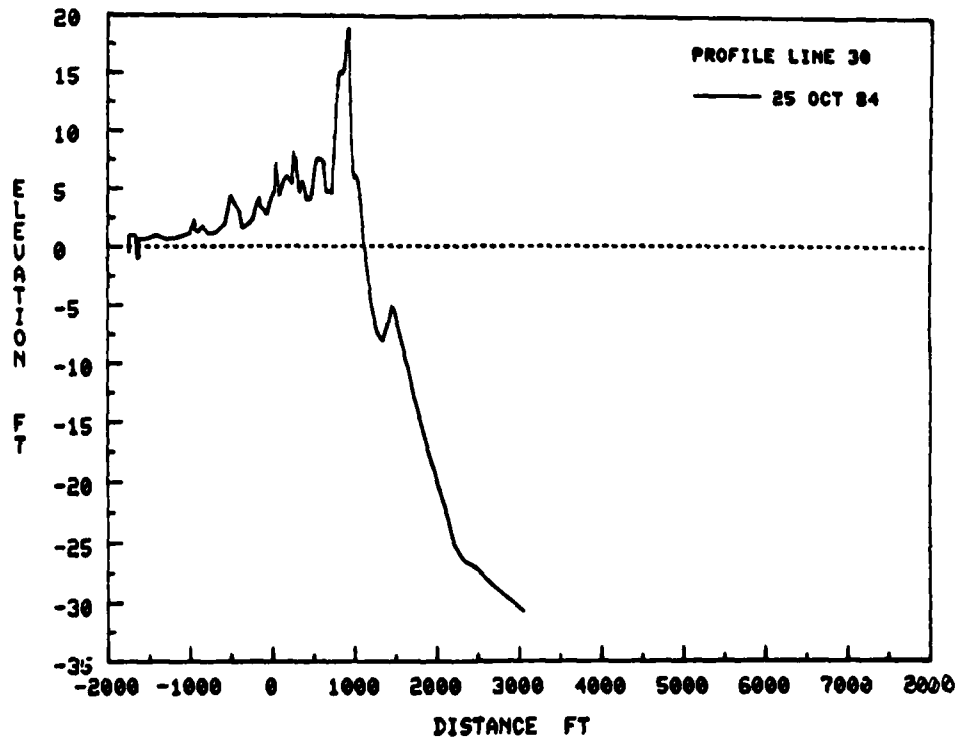












APPENDIX C
SEDIMENT ANALYSIS RESULTS

1. The grain size distribution tables of Appendix C provide results of the sieve analyses in both phi units and millimetres. Each sample is identified by profile number, distance (ft) from the profile origin (+ = seaward; - = landward of origin), and elevation (z, in feet referenced to NGVD) at which the sample was obtained. For example, sample AI-10: 521.47, z = 6.56 was collected on Profile AI-10, 521.47 ft seaward of the profile "0," at an elevation of 6.56 ft above mean sea level (msl). The grain size distribution curves, which follow the tables, are plotted on computer-generated forms that closely approximate North Atlantic Division Form No. 798 and are presented in the same order as the tables.

Sediment Size Distribution--Profile AI-T

SAMPLE IDENTIFICATION - AI-T:-1016.86 z=3.18

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-1.00	2.00000	.000	.000	.000
-.50	1.41421	.024	.022	.022
.00	1.00000	.019	.016	.038
.50	.70711	.025	.021	.059
1.00	.50000	.081	.069	.128
1.50	.35355	.520	.441	.568
2.00	.25000	11.780	9.980	10.548
2.50	.17678	54.750	46.382	56.930
3.00	.12500	45.270	38.351	95.281
3.50	.08839	5.060	4.287	99.568
4.00	.06250	.480	.407	99.975
4.50	.01563	.030	.025	100.000

SAMPLE IDENTIFICATION - AI-T:302.51 z=5.25

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-1.50	2.82843	.000	.000	.000
-.50	1.41421	.006	.007	.007
.00	1.00000	.015	.018	.026
.50	.70711	.104	.127	.152
1.00	.50000	1.909	2.322	2.474
1.50	.35355	6.957	8.464	10.938
2.00	.25000	21.993	26.756	37.694
2.50	.17678	32.274	39.263	76.957
3.00	.12500	17.202	20.927	97.884
3.50	.08839	1.541	1.875	99.759
4.00	.06250	.175	.213	99.972
4.50	.01563	.023	.028	100.000

SAMPLE IDENTIFICATION - AI-T:145.04 z=14.82

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-1.00	2.00000	.000	.000	.000
-.50	1.41421	.012	.011	.011
.00	1.00000	.024	.023	.034
.50	.70711	.069	.065	.099
1.00	.50000	.233	.219	.318
1.50	.35355	1.630	1.535	1.853
2.00	.25000	16.930	15.945	17.798
2.50	.17678	47.080	44.341	62.139
3.00	.12500	35.230	33.180	95.319
3.50	.08839	4.540	4.276	99.595
4.00	.06250	.410	.386	99.981
4.50	.01563	.020	.019	100.000

SAMPLE IDENTIFICATION - AI-T:399.93 z=6.32

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-.25	1.18921	.000	.000	.000
.25	.84090	.032	.024	.024
.75	.59460	.522	.364	.407
1.25	.42045	2.945	2.165	2.572
1.75	.29730	44.930	33.022	35.594
2.25	.21022	59.700	43.878	79.472
2.75	.14865	23.250	17.088	96.560
3.25	.10511	4.270	3.138	99.699
3.75	.07433	.360	.265	99.963
4.00	.01563	.050	.037	100.000

SAMPLE IDENTIFICATION - AI-T:206.62 z=7.32

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-1.75	3.36359	.000	.000	.000
-1.25	2.37841	.052	.054	.054
-.75	1.68179	.017	.017	.071
-.25	1.18921	.082	.084	.155
.25	.84090	.095	.098	.253
.75	.59460	.603	.621	.874
1.25	.42045	1.447	1.489	.963
1.75	.29730	14.619	15.047	17.410
2.25	.21022	42.270	43.508	60.918
2.75	.14865	29.300	30.158	91.076
3.25	.10511	7.130	7.339	98.415
3.75	.07433	1.450	1.492	99.907
4.00	.01563	.090	.095	100.000

SAMPLE IDENTIFICATION - AI-T:480.260 z=-.05

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-.25	1.18921	.000	.000	.000
.25	.84090	.011	.013	.013
.75	.59460	.195	.228	.241
1.25	.42045	1.578	1.845	2.086
1.75	.29730	16.203	18.947	21.033
2.25	.21022	30.030	35.116	56.149
2.75	.14865	24.270	28.380	84.529
3.25	.10511	10.500	12.746	97.275
3.75	.07433	2.240	2.619	99.895
4.00	.01563	.090	.105	100.000

(Continued)

(Sheet 1 of 3)

Profile AI-T (Continued)

SAMPLE IDENTIFICATION - AI-T:616.82 z=-5.26

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-1.66	2.00000	.000	.000	.000
-.50	1.41421	.030	.032	.032
.00	1.00000	.040	.043	.075
.50	.70711	.020	.021	.096
1.00	.50000	.060	.064	.160
1.50	.35355	.070	.075	.235
2.00	.25000	.750	.806	1.035
2.50	.17678	3.760	4.011	5.046
3.00	.12500	35.450	37.817	42.863
3.50	.08839	39.870	42.533	85.396
4.00	.06250	13.190	14.071	99.467
6.00	.01563	.500	.533	100.000

SAMPLE IDENTIFICATION - AI-T:4902.7 z=-11.82

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-1.50	2.82843	.006	.000	.006
-1.00	2.00000	.080	.055	.055
-.50	1.41421	.480	.331	.386
.00	1.00000	4.560	3.143	3.529
.50	.70711	13.800	9.512	13.041
1.00	.50000	27.320	18.831	31.872
1.50	.35355	37.306	25.710	57.582
2.00	.25000	40.710	28.060	85.642
2.50	.17678	16.280	11.221	96.864
3.00	.12500	3.780	2.605	99.469
3.50	.08839	.630	.434	99.904
4.00	.06250	.100	.069	99.972
6.00	.01563	.040	.028	100.000

SAMPLE IDENTIFICATION - AI-T:831.93 z=-12.24

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-.75	1.68179	.000	.000	.000
-.25	1.18921	.020	.022	.022
.25	.84090	.020	.022	.044
.75	.59460	.110	.120	.164
1.25	.42045	.090	.098	.262
1.75	.29730	.600	.654	.916
2.25	.21022	1.250	1.363	2.280
2.75	.14865	4.070	4.439	6.719
3.25	.10511	26.430	28.829	35.548
3.75	.07433	48.320	52.705	88.253
6.00	.01563	10.770	11.747	100.000

SAMPLE IDENTIFICATION - AI-T:6720.7 z=-20.04

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
.00	1.00000	.006	.000	.000
.50	.70711	.044	.025	.025
1.00	.50000	.493	.395	.430
1.50	.35355	1.996	1.599	2.029
2.00	.25000	6.959	5.574	7.603
2.50	.17678	25.351	20.306	27.909
3.00	.12500	55.370	44.352	72.261
3.50	.08839	26.470	21.203	93.464
4.00	.06250	7.670	6.144	99.608
6.00	.01563	.490	.392	100.000

SAMPLE IDENTIFICATION - AI-T:1693.70 z=-17.90

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-2.00	4.00000	.000	.000	.000
-1.50	2.82843	3.980	2.167	2.167
-1.00	2.00000	1.620	.882	3.049
-.50	1.41421	2.510	1.367	4.415
.00	1.00000	5.570	3.032	7.448
.50	.70711	17.710	9.642	17.090
1.00	.50000	38.090	20.737	37.827
1.50	.35355	41.790	22.752	60.578
2.00	.25000	40.730	22.174	82.753
2.50	.17678	20.080	10.932	93.685
3.00	.12500	9.150	4.981	98.666
3.50	.08839	2.130	1.160	99.826
4.00	.06250	.280	.152	99.978
6.00	.01563	.040	.022	100.000

SAMPLE IDENTIFICATION - AI-T:6844.8 z=-24.57

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-.75	1.68179	.000	.000	.000
-.25	1.18921	.014	.010	.010
.25	.84090	.068	.049	.059
.75	.59460	.261	.187	.246
1.25	.42045	.265	.190	.437
1.75	.29730	1.156	.830	1.267
2.25	.21022	4.225	3.035	4.302
2.75	.14865	27.065	19.441	23.743
3.25	.10511	68.020	48.860	72.603
3.75	.07433	32.986	23.690	96.293
6.00	.01563	5.160	3.707	100.000

Profile AI-T (Concluded)

SAMPLE IDENTIFICATION - AI-T:7138.0 z=30.59

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-1.00	2.00000	.000	.000	.000
-.50	1.41421	.040	.030	.030
.00	1.00000	.070	.053	.083
.50	.70711	.160	.121	.203
1.00	.50000	.370	.279	.482
1.50	.35353	.420	.317	.799
2.00	.25000	3.030	2.284	5.082
2.50	.17678	18.290	13.784	16.866
3.00	.12500	69.500	52.378	69.244
3.50	.08839	29.660	22.353	91.597
4.00	.06250	10.400	7.838	99.435
6.00	.01563	.750	.565	100.000

(Sheet 3 of 3)

Sediment Size Distribution--Profile AI-2

SAMPLE IDENTIFICATION - AI-2:-852 z=2.63

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-1.00	2.00000	.000	.000	.000
-.50	1.41421	.060	.045	.045
.00	1.00000	.110	.082	.127
.50	.70711	.430	.322	.450
1.00	.50000	3.800	2.848	3.298
1.50	.35355	16.760	12.561	15.859
2.00	.25000	58.200	43.618	59.477
2.50	.17678	37.430	28.052	87.529
3.00	.12500	14.860	11.137	98.666
3.50	.08839	1.580	1.184	99.850
4.00	.06250	.180	.135	99.985
6.00	.01563	.020	.015	100.000

SAMPLE IDENTIFICATION - AI-2:637.8 z=3.20

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-.75	1.68179	.000	.000	.000
-.25	1.18921	.030	.025	.025
.25	.84090	.170	.143	.168
.75	.59460	4.070	3.424	3.592
1.25	.42045	9.480	7.975	11.567
1.75	.29730	44.400	37.352	48.919
2.25	.21022	38.870	32.700	81.619
2.75	.14865	16.170	13.603	95.222
3.25	.10511	4.710	3.962	99.184
3.75	.07433	.850	.715	99.899
6.00	.01563	.120	.101	100.000

SAMPLE IDENTIFICATION - AI-2:425 z=7.25

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-.25	1.18921	.000	.000	.000
.25	.84090	.030	.021	.021
.75	.59460	.110	.077	.098
1.25	.42045	1.260	.879	.977
1.75	.29730	35.870	25.033	26.010
2.25	.21022	75.630	52.781	78.791
2.75	.14865	26.490	18.487	97.278
3.25	.10511	3.640	2.540	99.819
3.75	.07433	.180	.126	99.944
6.00	.01563	.080	.056	100.000

SAMPLE IDENTIFICATION - AI-2:893 z=5.61

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-1.00	2.00000	.000	.000	.000
-.50	1.41421	.010	.007	.007
.00	1.00000	.000	.000	.007
.50	.70711	.011	.006	.015
1.00	.50000	.116	.081	.096
1.50	.35355	1.750	1.220	1.316
2.00	.25000	25.420	17.727	19.043
2.50	.17678	78.380	54.659	73.702
3.00	.12500	35.130	24.498	98.201
3.50	.08839	2.310	1.611	99.812
4.00	.06250	.230	.160	99.972
6.00	.01563	.040	.028	100.000

SAMPLE IDENTIFICATION - AI-2:459.7 z=2.24

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-1.00	2.00000	.000	.000	.000
-.50	1.41421	.070	.054	.054
.00	1.00000	.160	.124	.178
.50	.70711	2.860	2.215	2.393
1.00	.50000	14.880	11.526	13.919
1.50	.35355	30.410	23.555	37.475
2.00	.25000	46.330	35.887	73.362
2.50	.17678	25.000	19.365	92.727
3.00	.12500	8.280	6.414	99.140
3.50	.08839	.940	.728	99.868
4.00	.06250	.150	.116	99.985
6.00	.01563	.020	.015	100.000

SAMPLE IDENTIFICATION - AI-2:939.3 z=2.27

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-.50	1.41421	.000	.000	.000
.00	1.00000	.020	.014	.014
.50	.70711	.040	.027	.041
1.00	.50000	2.190	1.497	1.538
1.50	.35355	21.680	14.818	16.356
2.00	.25000	56.330	38.500	54.856
2.50	.17678	46.800	31.987	86.843
3.00	.12500	17.200	11.756	98.599
3.50	.08839	1.720	1.176	99.774
4.00	.06250	.290	.198	99.973
6.00	.01563	.040	.027	100.000

(Continued)

(Sheet 1 of 2)

Profile AI-2 (Concluded)

SAMPLE IDENTIFICATION - AI-2:1179.6 z=-7.52

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-1.75	3.36359	.000	.000	.000
-1.25	2.37841	.080	.059	.059
-.75	1.68179	.020	.015	.074
-.25	1.18921	.110	.081	.155
.25	.84090	.310	.230	.385
.75	.59460	1.480	1.096	1.481
1.25	.42045	1.900	1.407	2.887
1.75	.29730	9.840	7.285	10.173
2.25	.21022	30.200	22.359	32.531
2.75	.14865	46.780	36.115	68.646
3.25	.10511	30.890	22.870	91.516
3.75	.07433	9.720	7.196	98.712
4.00	.01563	1.740	1.268	100.000

SAMPLE IDENTIFICATION - AI-2:6144 z=-24.24

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-1.00	2.00000	.000	.000	.000
-.50	1.41421	.047	.041	.041
.00	1.00000	.060	.052	.093
.50	.70711	.125	.109	.202
1.00	.50000	.405	.352	.554
1.50	.35355	.818	.712	1.266
2.00	.25000	3.276	2.850	4.116
2.50	.17678	10.665	9.280	13.396
3.00	.12500	52.934	46.056	59.454
3.50	.08839	34.390	29.923	89.376
4.00	.06250	11.630	10.119	99.495
6.00	.01563	.580	.505	100.000

SAMPLE IDENTIFICATION - AI-2:322.3 z=-12.15

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-2.00	4.00000	.000	.000	.000
-1.50	2.82843	.882	.605	.605
-1.00	2.00000	.624	.426	1.028
-.50	1.41421	.165	.113	1.141
.00	1.00000	.097	.066	1.207
.50	.70711	.120	.062	1.269
1.00	.50000	.459	.313	1.602
1.50	.35355	1.364	.931	2.533
2.00	.25000	11.100	7.577	10.110
2.50	.17676	43.310	29.562	39.673
3.00	.12500	55.220	37.693	77.365
3.50	.08839	22.420	15.304	92.669
4.00	.06250	10.320	7.644	99.713
6.00	.01563	.420	.287	100.000

SAMPLE IDENTIFICATION - AI-2:7287 z=-29.95

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-1.00	2.00000	.000	.000	.000
-.50	1.41421	.020	.015	.015
.00	1.00000	.020	.015	.029
.50	.70711	.080	.058	.087
1.00	.50000	.140	.102	.189
1.50	.35355	.290	.210	.399
2.00	.25000	.980	.711	1.110
2.50	.17678	3.690	2.676	3.786
3.00	.12500	49.910	36.261	39.987
3.50	.08839	59.920	43.461	83.448
4.00	.06250	21.250	15.413	98.861
6.00	.01563	1.570	1.139	100.000

SAMPLE IDENTIFICATION - AI-2:2337 z=-18.18

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-1.75	3.36359	.000	.000	.000
-1.25	2.37841	.030	.022	.022
-.75	1.68179	.000	.000	.022
-.25	1.18921	.030	.022	.045
.25	.84090	.040	.030	.074
.75	.59460	.180	.134	.208
1.25	.42045	.170	.126	.334
1.75	.29730	2.480	1.841	2.175
2.25	.21022	14.780	12.456	14.631
2.75	.14865	49.840	36.998	51.629
3.25	.10511	51.080	37.918	89.546
3.75	.07433	12.930	9.598	99.146
6.00	.01563	1.150	.854	100.000

Sediment Size Distribution--Profile AI-4

SAMPLE IDENTIFICATION - AI-4:-560.3 z=1.78

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-1.00	2.00000	.000	.000	.000
-.50	1.41421	.050	.037	.037
.00	1.00000	.030	.022	.058
.50	.70711	.190	.139	.197
1.00	.50000	1.810	1.323	1.520
1.50	.35355	10.780	7.877	9.396
2.00	.25000	62.460	45.652	55.049
2.50	.17678	46.510	33.984	89.033
3.00	.12500	13.740	10.039	99.072
3.50	.08839	1.090	.796	99.868
4.00	.06250	.110	.080	99.949
6.00	.01563	.070	.051	100.000

SAMPLE IDENTIFICATION - AI-4:650 z=7.98

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-.50	1.41421	.000	.000	.000
.00	1.00000	.040	.045	.045
.50	.70711	.660	.747	.792
1.00	.50000	10.160	11.501	12.293
1.50	.35355	31.210	35.329	47.623
2.00	.25000	35.750	40.469	88.091
2.50	.17678	8.660	9.803	97.894
3.00	.12500	1.540	1.743	99.638
3.50	.08839	.270	.306	99.943
4.00	.06250	.050	.057	100.000

SAMPLE IDENTIFICATION - AI-4:475.6 z=6.53

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-.75	1.68179	.000	.000	.000
-.25	1.18921	.020	.012	.012
.25	.84090	.020	.012	.025
.75	.59460	.180	.112	.137
1.25	.42045	1.600	.996	1.133
1.75	.29730	51.820	32.264	33.398
2.25	.21022	83.190	51.796	85.194
2.75	.14865	21.410	13.330	98.524
3.25	.10511	2.260	1.407	99.932
3.75	.07433	.080	.050	99.981
6.00	.01563	.030	.019	100.000

SAMPLE IDENTIFICATION - AI-4:769 z=7.02

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-.75	1.68179	.000	.000	.000
-.25	1.18921	.010	.007	.007
.25	.84090	.340	.248	.255
.75	.59460	3.520	2.567	2.822
1.25	.42045	5.530	4.033	6.855
1.75	.29730	40.310	29.398	36.253
2.25	.21022	64.670	47.163	83.416
2.75	.14865	20.000	14.586	98.002
3.25	.10511	2.250	1.641	99.643
3.75	.07433	.360	.263	99.905
6.00	.01563	.130	.095	100.000

SAMPLE IDENTIFICATION - AI-4:480 z=6.06

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-.75	1.68179	.000	.000	.000
-.25	1.18921	.110	.070	.070
.25	.84090	4.440	2.819	2.889
.75	.59460	27.860	17.691	20.580
1.25	.42045	22.250	14.129	34.709
1.75	.29730	52.280	33.198	67.907
2.25	.21022	37.220	23.635	91.542
2.75	.14865	11.770	7.474	99.016
3.25	.10511	1.340	.851	99.867
3.75	.07433	.140	.089	99.956
6.00	.01563	.070	.044	100.000

SAMPLE IDENTIFICATION - AI-4:849 z=1.29

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-2.00	4.00000	.000	.000	.000
-1.50	2.82843	4.540	3.479	3.479
-1.00	2.00000	2.160	1.521	5.000
-.50	1.41421	4.370	3.077	8.077
.00	1.00000	8.390	5.908	13.986
.50	.70711	12.530	8.824	22.810
1.00	.50000	15.530	10.937	33.746
1.50	.35355	15.170	10.683	44.430
2.00	.25000	22.430	15.796	60.225
2.50	.17678	23.280	16.394	76.620
3.00	.12500	23.670	16.669	93.289
3.50	.08839	8.120	5.718	99.007
4.00	.06250	1.300	.915	99.923
6.00	.01563	.110	.077	100.000

(Continued)

(Sheet 1 of 2)

Profile AI-4 (Concluded)

SAMPLE IDENTIFICATION - AI-4:855 z=0.58

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-2.00	4.00000	.000	.000	.000
-1.50	2.82843	.080	.082	.082
-1.00	2.00000	.000	.000	.082
-.50	1.41421	.000	.000	.082
.00	1.00000	.045	.046	.128
.50	.70711	.183	.188	.316
1.00	.50000	.532	.546	.862
1.50	.35355	.916	.940	1.801
2.00	.25000	9.804	10.057	11.859
2.50	.17678	32.800	33.648	45.507
3.00	.12500	40.790	41.844	87.351
3.50	.08839	10.400	10.669	98.020
4.00	.06250	1.830	1.877	99.897
6.00	.01563	.100	.103	100.000

SAMPLE IDENTIFICATION - AI-4:3392 z=24.11

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-.50	1.41421	.000	.000	.000
.00	1.00000	.030	.030	.030
.50	.70711	.070	.070	.100
1.00	.50000	.150	.149	.249
1.50	.35355	.430	.428	.677
2.00	.25000	2.050	2.041	2.719
2.50	.17678	6.350	6.323	9.042
3.00	.12500	31.660	31.528	40.570
3.50	.08839	32.390	32.255	72.824
4.00	.06250	22.620	22.525	95.350
6.00	.01563	4.670	4.650	100.000

SAMPLE IDENTIFICATION - AI-4:1113 z=-6.38

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-1.75	3.36359	.000	.000	.000
-1.25	2.37841	.120	.068	.068
-.75	1.68179	.180	.102	.170
-.25	1.18921	.330	.187	.356
.25	.84090	.710	.401	.757
.75	.59460	2.200	1.243	2.001
1.25	.42045	2.290	1.294	3.295
1.75	.29730	12.620	7.132	10.427
2.25	.21022	46.400	26.224	36.651
2.75	.14865	66.310	37.476	74.127
3.25	.10511	37.980	21.465	95.592
3.75	.07433	7.310	4.131	99.723
6.00	.01563	.490	.277	100.000

SAMPLE IDENTIFICATION - AI-4:6405 z=-30.57

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-.25	1.18921	.000	.000	.000
.25	.84090	.120	.134	.134
.75	.59460	1.000	1.118	1.253
1.25	.42045	1.370	1.532	2.785
1.75	.29730	6.060	6.778	9.563
2.25	.21022	4.660	5.212	14.775
2.75	.14865	4.440	4.966	19.741
3.25	.10511	33.360	37.311	57.052
3.75	.07433	31.460	35.186	92.238
6.00	.01563	6.940	7.762	100.000

SAMPLE IDENTIFICATION - AI-4:1244 z=-12.28

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-2.25	4.75683	.000	.000	.000
-1.75	3.36359	.760	.659	.659
-1.25	2.37841	.170	.147	.807
-.75	1.68179	.090	.078	.885
-.25	1.18921	.170	.147	1.032
.25	.84090	.330	.286	1.318
.75	.59460	.740	.642	1.960
1.25	.42045	.440	.382	2.342
1.75	.29730	2.560	2.220	4.562
2.25	.21022	12.450	10.799	15.361
2.75	.14865	42.090	36.508	51.869
3.25	.10511	40.590	35.207	87.076
3.75	.07433	12.370	10.729	97.806
6.00	.01563	2.530	2.194	100.000

(Sheet 2 of 2)

Sediment Size Distribution--Profile AI-6

SAMPLE IDENTIFICATION - AI-6;-774.47 z=1.50

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-1.00	2.00000	.000	.000	.000
#####	#####	.0000	.0000	.0000
.50	.70711	.400	.519	.584
1.00	.50000	3.390	4.399	4.983
1.50	.35355	10.300	13.366	18.349
2.00	.25000	26.280	34.103	52.453
2.50	.17678	27.830	36.115	88.567
3.00	.12500	8.370	10.862	99.429
3.50	.08839	.360	.467	99.896
4.00	.06250	.060	.078	99.974
6.00	.01563	.020	.026	100.000

SAMPLE IDENTIFICATION - AI-6:905.2 z=7.91

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-.75	1.68179	.000	.000	.000
-.25	1.18921	.095	.131	.131
.25	.84090	.488	.673	.804
.75	.59460	4.551	6.276	7.080
1.25	.42045	7.037	9.705	16.785
1.75	.29730	26.107	36.005	52.790
2.25	.21022	25.522	35.190	87.988
2.75	.14865	7.070	9.750	97.738
3.25	.10511	1.300	1.903	99.641
3.75	.07433	.230	.317	99.959
6.00	.01563	.030	.041	100.000

SAMPLE IDENTIFICATION - AI-6:606.6 z=8.42

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-.50	1.41421	.000	.000	.000
.00	1.00000	.189	.246	.246
.50	.70711	2.473	3.213	3.458
1.00	.50000	12.075	15.687	19.145
1.50	.35355	19.730	25.631	44.776
2.00	.25000	28.090	36.491	81.267
2.50	.17678	12.170	15.810	97.077
3.00	.12500	1.850	2.403	99.480
3.50	.08839	.340	.442	99.922
4.00	.06250	.060	.078	100.000

SAMPLE IDENTIFICATION - AI-6:983.3 z=1.46

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
.00	1.00000	.000	.000	.000
.50	.70711	.016	.019	.019
1.00	.50000	.058	.070	.089
1.50	.35355	1.344	1.615	1.704
2.00	.25000	27.159	32.644	34.349
2.50	.17678	37.900	45.555	79.903
3.00	.12500	14.850	17.849	97.752
3.50	.08839	1.540	1.851	99.603
4.00	.06250	.300	.361	99.964
6.00	.01563	.030	.036	100.000

SAMPLE IDENTIFICATION - AI-6:678.1 z=6.25

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-1.50	2.82843	.000	.000	.000
-1.00	2.00000	.020	.021	.021
.50	1.41421	.140	.150	.172
.00	1.00000	.610	.654	.826
.50	.70711	6.070	6.509	7.334
1.00	.50000	22.050	23.644	30.978
1.50	.35355	29.310	31.428	62.406
2.00	.25000	25.250	27.075	89.481
2.50	.17678	8.050	8.632	98.113
3.00	.12500	1.470	1.576	99.689
3.50	.08839	.210	.225	99.914
4.00	.06250	.060	.064	99.979
6.00	.01563	.020	.021	100.000

SAMPLE IDENTIFICATION - AI-6:1036.4 z=-1.11

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-2.25	4.75683	.000	.000	.000
-1.75	3.36359	5.280	5.694	5.694
-1.25	2.37841	2.470	2.664	8.358
-.75	1.68179	5.300	5.716	14.073
-.25	1.18921	8.820	9.511	23.585
.25	.84090	14.220	15.335	38.919
.75	.59460	16.800	18.117	57.037
1.25	.42045	7.010	7.560	64.596
1.75	.29730	9.770	10.536	75.132
2.25	.21022	9.700	10.460	85.593
2.75	.14865	9.040	9.749	95.341
3.25	.10511	3.750	4.044	99.385
3.75	.07433	.470	.507	99.892
6.00	.01563	.100	.106	100.000

(Continued)

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Profile AI-6 (Concluded)

SAMPLE IDENTIFICATION - AI-6:1320 z=-6.82

PHI SIZE	NH	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-2.25	4.75683	.000	.000	.000
-1.75	3.36359	.310	.380	.380
-1.25	2.37841	.130	.159	.539
-.75	1.68179	.340	.417	.956
-.25	1.18921	.460	.564	1.520
.25	.84090	.490	.846	2.366
.75	.59460	1.230	1.508	3.874
1.25	.42045	1.140	1.398	5.272
1.75	.29730	6.310	7.736	13.007
2.25	.21022	19.920	24.421	37.428
2.75	.14865	28.300	34.694	72.122
3.25	.10511	18.310	22.447	94.569
3.75	.07433	4.040	4.933	99.522
4.00	.01563	.390	.478	100.000

SAMPLE IDENTIFICATION - AI-6:3045 z=-23.93

PHI SIZE	NH	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-1.50	2.82843	.000	.000	.000
-1.00	2.00000	.010	.013	.013
-.50	1.41421	.000	.000	.013
.00	1.00000	.010	.013	.025
.50	.70711	.048	.060	.085
1.00	.50000	.211	.264	.350
1.50	.35355	.764	.957	1.307
2.00	.25000	3.913	4.904	6.211
2.50	.17678	5.528	6.928	13.139
3.00	.12500	22.461	28.148	41.287
3.50	.08839	26.222	32.862	74.149
4.00	.06250	18.730	23.473	97.621
6.00	.01563	1.898	2.379	100.000

SAMPLE IDENTIFICATION - AI-6:1517 z=-12.27

PHI SIZE	NH	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-2.00	4.00000	.000	.000	.000
-1.50	2.82843	.080	.090	.090
-1.00	2.00000	.000	.000	.090
-.50	1.41421	.030	.034	.124
.00	1.00000	.120	.135	.259
.50	.70711	.370	.416	.675
1.00	.50000	.920	1.034	1.709
1.50	.35355	1.410	1.585	3.294
2.00	.25000	3.290	3.699	6.993
2.50	.17678	7.660	8.612	15.604
3.00	.12500	29.920	33.637	49.241
3.50	.08839	28.960	32.558	81.799
4.00	.06250	15.410	17.324	99.123
6.00	.01563	.780	.877	100.000

SAMPLE IDENTIFICATION - AI-6:4841 z=-29.90

PHI SIZE	NH	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-.50	1.41421	.000	.000	.000
.00	1.00000	.013	.017	.017
.50	.70711	.335	.433	.449
1.00	.50000	3.416	4.412	4.862
1.50	.35355	13.688	17.679	22.541
2.00	.25000	36.250	46.820	69.361
2.50	.17678	12.717	16.425	85.786
3.00	.12500	6.575	8.492	94.278
3.50	.08839	4.266	5.510	99.786
4.00	.06250	.111	.143	99.932
6.00	.01563	.053	.068	100.000

SAMPLE IDENTIFICATION - AI-6:1921 z=-17.89

PHI SIZE	NH	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-.75	1.68179	.000	.000	.000
-.25	1.18921	.010	.009	.009
.25	.84090	.252	.225	.234
.75	.59460	1.666	1.489	1.723
1.25	.42045	1.911	1.708	3.432
1.75	.29730	5.948	5.317	8.748
2.25	.21022	7.410	6.623	15.372
2.75	.14865	10.218	9.133	24.505
3.25	.10511	32.290	28.863	53.368
3.75	.07433	40.410	36.121	89.488
6.00	.01563	11.760	10.512	100.000

Sediment Size Distribution--Profile AI-10

SAMPLE IDENTIFICATION - SA AI-101-102.51 z=1.17

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-1.50	2.82843	.000	.000	.000
-1.00	2.00000	.020	.016	.016
-.50	1.41421	.006	.005	.021
.00	1.00000	.243	.198	.219
.50	.70711	1.657	1.351	1.571
1.00	.50000	8.863	7.229	8.799
1.50	.35355	27.191	22.177	30.976
2.00	.25000	57.650	47.019	77.995
2.50	.17678	20.400	16.638	94.633
3.00	.12500	5.280	4.306	98.940
3.50	.08839	.970	.791	99.731
4.00	.06250	.270	.220	99.951
6.00	.01563	.060	.049	100.000

SAMPLE IDENTIFICATION - SAM AI-10:477.74 z=6.94

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-1.00	2.00000	.000	.000	.000
-.50	1.41421	.010	.007	.007
.00	1.00000	.000	.000	.007
.50	.70711	.000	.000	.007
1.00	.50000	.040	.028	.035
1.50	.35355	1.279	.902	.937
2.00	.25000	78.010	55.011	55.948
2.50	.17678	43.020	30.337	86.284
3.00	.12500	16.510	11.642	97.927
3.50	.08839	2.720	1.918	99.845
4.00	.06250	.200	.141	99.986
6.00	.01563	.020	.014	100.000

SAMPLE IDENTIFICATION - SAM AI-10:521.5 z=6.56

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-1.00	2.00000	.000	.000	.000
-.50	1.41421	.010	.008	.008
.00	1.00000	.020	.015	.023
.50	.70711	.230	.173	.195
1.00	.50000	3.750	2.814	3.009
1.50	.35355	23.290	17.474	20.483
2.00	.25000	73.400	55.072	75.555
2.50	.17678	25.520	19.148	94.703
3.00	.12500	6.000	4.502	99.205
3.50	.08839	1.010	.758	99.962
4.00	.06250	.050	.038	100.000

SAMPLE IDENTIFICATION - SAM AI-10:669.7 z=7.44

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-2.00	4.00000	.000	.000	.000
-1.50	2.82843	.070	.040	.040
-1.00	2.00000	.100	.057	.097
-.50	1.41421	.410	.233	.330
.00	1.00000	2.080	1.182	1.511
.50	.70711	6.810	3.869	5.381
1.00	.50000	16.160	9.182	14.563
1.50	.35355	28.430	16.153	30.716
2.00	.25000	70.430	40.017	70.733
2.50	.17678	38.490	21.869	92.602
3.00	.12500	10.700	6.080	98.682
3.50	.08839	2.190	1.244	99.926
4.00	.06250	.130	.074	100.000

SAMPLE IDENTIFICATION - SAM AI-10:759.6 z=2.50

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-1.50	2.82843	.000	.000	.000
-1.00	2.00000	.040	.027	.027
-.50	1.41421	.350	.237	.264
.00	1.00000	2.020	1.367	1.631
.50	.70711	8.000	5.413	7.043
1.00	.50000	20.080	13.586	20.629
1.50	.35355	31.960	21.624	42.253
2.00	.25000	43.690	29.560	71.813
2.50	.17678	28.400	19.215	91.028
3.00	.12500	12.400	8.390	99.418
3.50	.08839	.790	.535	99.953
4.00	.06250	.060	.041	99.993
6.00	.01563	.010	.007	100.000

SAMPLE IDENTIFICATION - SAM AI-10:798.8 z=0.38

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-2.00	4.00000	.000	.000	.000
-1.50	2.82843	4.290	5.061	5.061
-1.00	2.00000	.930	1.097	6.158
-.50	1.41421	1.390	1.640	7.798
.00	1.00000	2.310	2.725	10.523
.50	.70711	4.030	4.754	15.277
1.00	.50000	5.850	6.901	22.178
1.50	.35355	6.040	7.125	29.303
2.00	.25000	9.940	11.726	41.029
2.50	.17678	12.910	15.229	56.258
3.00	.12500	27.590	32.547	88.805
3.50	.08839	8.660	10.216	99.021
4.00	.06250	.780	.920	99.941
6.00	.01563	.050	.059	100.000

(Continued)

(Sheet 1 of 2)

Profile AI-10 (Concluded)

SAMPLE IDENTIFICATION - SAM AI-10:1109.1 z=-5.93

PHI SIZE	MM	FRACTION WEIGHT	FRACTION ACCUMULATED PERCENT	PERCENT
-2.00	4.00000	.000	.000	.000
-1.50	2.82843	.560	.441	.441
-1.00	2.00000	.130	.102	.544
-.50	1.41421	.120	.095	.638
.00	1.00000	.200	.158	.796
.50	.70711	.330	.260	1.056
1.00	.50000	.510	.402	1.438
1.50	.35355	1.030	.812	2.270
2.00	.25000	5.320	4.192	6.462
2.50	.17678	23.190	18.274	24.736
3.00	.12500	72.720	57.305	82.041
3.50	.08839	19.220	15.146	97.187
4.00	.06250	3.480	2.742	99.929
6.00	.01563	.090	.071	100.000

SAMPLE IDENTIFICATION - SAM AI-10:1396.2 z=-13.68

PHI SIZE	MM	FRACTION WEIGHT	FRACTION ACCUMULATED PERCENT	PERCENT
-1.00	2.00000	.000	.000	.000
-.50	1.41421	.038	.029	.029
.00	1.00000	.044	.034	.063
.50	.70711	.112	.086	.150
1.00	.50000	.434	.335	.485
1.50	.35355	1.983	1.223	1.708
2.00	.25000	5.786	4.467	6.176
2.50	.17678	9.983	7.710	13.886
3.00	.12500	37.940	29.302	43.188
3.50	.08839	45.280	34.971	78.159
4.00	.06250	26.750	20.640	98.818
6.00	.01563	1.530	1.182	100.000

SAMPLE IDENTIFICATION - SAM AI-10:1591.5 z=-18.22

PHI SIZE	MM	FRACTION WEIGHT	FRACTION ACCUMULATED PERCENT	PERCENT
-1.00	2.00000	.000	.000	.000
-.50	1.41421	.030	.034	.034
.00	1.00000	.210	.153	.189
.50	.70711	1.250	.911	1.101
1.00	.50000	6.910	5.036	6.137
1.50	.35355	13.550	9.875	16.012
2.00	.25000	24.780	18.060	34.072
2.50	.17678	19.250	14.030	48.101
3.00	.12500	31.690	23.096	71.197
3.50	.08839	26.680	19.445	90.642
4.00	.06250	11.900	8.673	99.315
6.00	.01563	.940	.685	100.000

SAMPLE IDENTIFICATION - SAM AI-10:2051.1 z=-23.89

PHI SIZE	MM	FRACTION WEIGHT	FRACTION ACCUMULATED PERCENT	PERCENT
-1.00	2.00000	.000	.000	.000
-.50	1.41421	.040	.034	.034
.00	1.00000	.060	.051	.085
.50	.70711	.310	.265	.351
1.00	.50000	1.450	1.240	1.590
1.50	.35355	4.560	3.898	5.489
2.00	.25000	21.400	18.295	23.784
2.50	.17678	46.780	39.973	63.777
3.00	.12500	32.540	27.819	91.596
3.50	.08839	7.470	6.386	97.982
4.00	.06250	2.270	1.941	99.923
6.00	.01563	.090	.077	100.000

SAMPLE IDENTIFICATION - SAM AI-10:3294.4 z=-31.00

PHI SIZE	MM	FRACTION WEIGHT	FRACTION ACCUMULATED PERCENT	PERCENT
-1.00	2.00000	.000	.000	.000
-.50	1.41421	.060	.048	.048
.00	1.00000	.510	.405	.452
.50	.70711	2.690	2.134	2.586
1.00	.50000	10.940	8.678	11.264
1.50	.35355	20.520	16.277	27.540
2.00	.25000	54.380	43.135	70.675
2.50	.17678	23.960	19.005	89.680
3.00	.12500	10.140	8.043	97.723
3.50	.08839	2.240	1.777	99.500
4.00	.06250	.610	.484	99.984
6.00	.01563	.020	.016	100.000

(Sheet 2 of 2)

Sediment Size Distribution--Profile AI-14

SAMPLE IDENTIFICATION - SA AI-14:443.6 z=1.50

PHI SIZE	MM	FRACTION WEIGHT	FRACTION ACCUMULATED PERCENT	FRACTION ACCUMULATED PERCENT
.00	1.00000	.000	.000	.000
.50	.70711	.020	.012	.012
1.00	.50000	.270	.164	.176
1.50	.35355	3.980	2.170	2.346
2.00	.25000	52.610	31.893	34.239
2.50	.17678	74.280	45.029	79.268
3.00	.12500	28.230	17.125	96.393
3.50	.08839	5.600	3.395	99.788
4.00	.06250	.340	.206	99.994
6.00	.01563	.010	.006	100.000

SAMPLE IDENTIFICATION - SA AI-14:445.3 z=8.94

PHI SIZE	MM	FRACTION WEIGHT	FRACTION ACCUMULATED PERCENT	FRACTION ACCUMULATED PERCENT
-.50	1.41421	.000	.000	.000
.00	1.00000	.080	.062	.062
.50	.70711	.950	.737	.799
1.00	.50000	6.530	5.082	5.881
1.50	.35355	22.440	17.412	23.293
2.00	.25000	53.110	41.209	64.502
2.50	.17678	28.890	22.416	86.918
3.00	.12500	12.670	9.831	96.749
3.50	.08839	3.970	3.080	99.829
4.00	.06250	.210	.163	99.992
6.00	.01563	.010	.008	100.000

SAMPLE IDENTIFICATION - SA AI-14:467.5 z=6.87

PHI SIZE	MM	FRACTION WEIGHT	FRACTION ACCUMULATED PERCENT	FRACTION ACCUMULATED PERCENT
-.50	1.41421	.000	.000	.000
.00	1.00000	.010	.008	.008
.50	.70711	.180	.153	.161
1.00	.50000	3.390	2.877	3.038
1.50	.35355	20.820	17.670	20.708
2.00	.25000	60.750	51.557	72.265
2.50	.17678	17.830	15.132	87.397
3.00	.12500	11.710	9.938	97.335
3.50	.08839	3.030	2.572	99.907
4.00	.06250	.100	.085	99.992
6.00	.01563	.010	.008	100.000

SAMPLE IDENTIFICATION - SA AI-14:478.6 z=7.19

PHI SIZE	MM	FRACTION WEIGHT	FRACTION ACCUMULATED PERCENT	FRACTION ACCUMULATED PERCENT
-1.50	2.82843	.000	.000	.000
-1.00	2.00000	.020	.011	.011
-.50	1.41421	.030	.016	.027
.00	1.00000	.740	.399	.426
.50	.70711	2.940	1.585	2.011
1.00	.50000	10.280	5.542	7.553
1.50	.35355	25.440	13.715	21.268
2.00	.25000	59.780	32.228	53.496
2.50	.17678	35.660	19.225	72.721
3.00	.12500	36.840	19.861	92.582
3.50	.08839	12.940	6.976	99.558
4.00	.06250	.820	.442	100.000

SAMPLE IDENTIFICATION - SA AI-14:780.9 z=.83

PHI SIZE	MM	FRACTION WEIGHT	FRACTION ACCUMULATED PERCENT	FRACTION ACCUMULATED PERCENT
-2.00	4.00000	.000	.000	.000
-1.50	2.82843	1.160	.738	.738
-1.00	2.00000	.390	.255	1.013
-.50	1.41421	1.470	.960	1.973
.00	1.00000	4.800	3.136	5.108
.50	.70711	10.420	6.807	11.915
1.00	.50000	25.330	16.560	28.475
1.50	.35355	38.040	24.850	53.325
2.00	.25000	35.290	23.053	76.378
2.50	.17678	23.720	15.495	91.874
3.00	.12500	11.170	7.297	99.170
3.50	.08839	1.150	.751	99.922
4.00	.06250	.110	.072	99.993
6.00	.01563	.010	.007	100.000

SAMPLE IDENTIFICATION - SA AI-14:818.1 z=-1.69

PHI SIZE	MM	FRACTION WEIGHT	FRACTION ACCUMULATED PERCENT	FRACTION ACCUMULATED PERCENT
-1.50	2.82843	.000	.000	.000
-1.00	2.00000	.100	.087	.087
-.50	1.41421	.190	.165	.252
.00	1.00000	.480	.418	.670
.50	.70711	1.440	1.253	1.923
1.00	.50000	5.220	4.543	6.466
1.50	.35355	10.960	9.538	16.004
2.00	.25000	24.280	21.130	37.133
2.50	.17678	32.380	28.179	65.312
3.00	.12500	33.130	28.831	94.143
3.50	.08839	6.220	5.413	99.556
4.00	.06250	.500	.435	99.991
6.00	.01563	.010	.009	100.000

(Continued)

(Sheet 1 of 2)

Profile AI-14 (Concluded)

SAMPLE IDENTIFICATION - SA AI-14:1096.1 z=-6.49

PHI SIZE	MM	FRACTION WEIGHT	FRACTION ACCUMULATED PERCENT	PERCENT
-2.00	4.00000	.000	.000	.000
-1.50	2.82843	.840	.577	.577
-1.00	2.00000	.200	.137	.714
-.50	1.41421	.260	.179	.893
.00	1.00000	.480	.330	1.222
.50	.70711	.780	.536	1.738
1.00	.50000	2.360	1.620	3.378
1.50	.35355	5.730	3.934	7.312
2.00	.25000	13.960	9.585	16.897
2.50	.17678	28.890	19.835	36.732
3.00	.12500	62.720	43.062	79.794
3.50	.08839	25.220	17.315	97.110
4.00	.06250	4.130	2.836	99.945
6.00	.01563	.080	.035	100.000

SAMPLE IDENTIFICATION - SA AI-14:2145.9 z=-23.74

PHI SIZE	MM	FRACTION WEIGHT	FRACTION ACCUMULATED PERCENT	PERCENT
-2.00	4.00000	.000	.000	.000
-1.50	2.82843	2.110	1.687	1.687
-1.00	2.00000	.720	.576	2.263
-.50	1.41421	1.920	1.535	3.798
.00	1.00000	4.030	3.223	7.021
.50	.70711	8.090	6.469	13.491
1.00	.50000	16.670	13.331	26.821
1.50	.35355	30.570	24.446	51.267
2.00	.25000	42.190	33.739	85.006
2.50	.17678	14.210	11.363	96.369
3.00	.12500	3.770	3.015	99.384
3.50	.08839	.640	.512	99.896
4.00	.06250	.120	.096	99.992
6.00	.01563	.010	.008	100.000

SAMPLE IDENTIFICATION - SA AI-14:1397.6 z=-12.53

PHI SIZE	MM	FRACTION WEIGHT	FRACTION ACCUMULATED PERCENT	PERCENT
-1.50	2.82843	.000	.000	.000
-1.00	2.00000	.030	.032	.032
-.50	1.41421	.090	.097	.129
.00	1.00000	.260	.279	.408
.50	.70711	1.030	1.105	1.513
1.00	.50000	3.390	3.637	5.150
1.50	.35355	5.360	5.751	10.901
2.00	.25000	8.610	9.238	20.139
2.50	.17678	14.110	15.139	35.279
3.00	.12500	33.380	35.815	71.094
3.50	.08839	20.420	21.910	93.004
4.00	.06250	6.120	6.567	99.571
6.00	.01563	.400	.429	100.000

SAMPLE IDENTIFICATION - SA AI-14:2966.5 z=-30.40

PHI SIZE	MM	FRACTION WEIGHT	FRACTION ACCUMULATED PERCENT	PERCENT
-1.50	2.82843	.000	.000	.000
-1.00	2.00000	.070	.065	.065
-.50	1.41421	.380	.354	.419
.00	1.00000	1.330	1.239	1.659
.50	.70711	6.300	5.871	7.530
1.00	.50000	19.880	18.526	26.055
1.50	.35355	35.580	33.156	59.212
2.00	.25000	32.880	30.640	89.852
2.50	.17678	6.350	5.917	95.769
3.00	.12500	3.680	3.429	99.199
3.50	.08839	.670	.624	99.823
4.00	.06250	.160	.149	99.972
6.00	.01563	.030	.028	100.000

SAMPLE IDENTIFICATION - SA AI-14:1763.6 z=-18.91

PHI SIZE	MM	FRACTION WEIGHT	FRACTION ACCUMULATED PERCENT	PERCENT
-2.00	4.00000	.000	.000	.000
-1.50	2.82843	.550	.430	.430
-1.00	2.00000	.630	.493	.923
-.50	1.41421	1.530	1.197	2.121
.00	1.00000	4.860	3.803	5.923
.50	.70711	11.360	8.889	14.812
1.00	.50000	23.420	18.326	33.138
1.50	.35355	30.960	24.225	57.363
2.00	.25000	30.910	24.186	81.549
2.50	.17678	13.450	10.524	92.074
3.00	.12500	6.610	5.172	97.246
3.50	.08839	2.360	1.847	99.092
4.00	.06250	1.030	.806	99.898
6.00	.01563	.130	.102	100.000

(Sheet 2 of 2)

Sediment Size Distribution--Profile AI-18

SAMPLE IDENTIFICATION - AI-18:400 z=12 (estimated)

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
.00	1.00000	.000	.000	.000
.50	.70711	.060	.043	.043
1.00	.50000	2.310	1.657	1.700
1.50	.35355	33.680	24.161	25.861
2.00	.25000	79.460	57.001	82.862
2.50	.17678	19.000	13.630	96.492
3.00	.12500	4.470	3.207	99.699
3.50	.08839	.400	.287	99.986
4.00	.06250	.020	.014	100.000

SAMPLE IDENTIFICATION - AI-18:403.6 z=11.91

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-.50	1.41421	.000	.000	.000
.00	1.00000	.170	.106	.106
.50	.70711	.990	.618	.724
1.00	.50000	4.860	3.033	3.757
1.50	.35355	25.910	16.168	19.925
2.00	.25000	77.080	48.100	68.025
2.50	.17678	33.750	21.061	89.086
3.00	.12500	14.670	9.154	98.240
3.50	.08839	2.650	1.654	99.894
4.00	.06250	.160	.100	99.994
6.00	.01563	.010	.006	100.000

SAMPLE IDENTIFICATION - AI-18:436.5 z=7.85

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-1.00	2.00000	.000	.000	.000
-.50	1.41421	.090	.090	.090
.00	1.00000	1.970	1.975	2.066
.50	.70711	9.410	9.435	11.501
1.00	.50000	16.500	16.545	28.046
1.50	.35355	22.640	22.701	50.747
2.00	.25000	29.640	29.720	80.467
2.50	.17678	14.150	14.188	94.656
3.00	.12500	4.280	4.292	98.947
3.50	.08839	.990	.993	99.940
4.00	.06250	.060	.060	100.000

SAMPLE IDENTIFICATION - AI-18:523.4 z=3.44

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-.50	1.41421	.000	.000	.000
.00	1.00000	.010	.008	.008
.50	.70711	.100	.078	.086
1.00	.50000	.900	.704	.790
1.50	.35355	4.400	3.442	4.232
2.00	.25000	23.330	18.251	22.483
2.50	.17678	59.680	46.687	69.170
3.00	.12500	35.100	27.458	96.628
3.50	.08839	3.920	3.067	99.695
4.00	.06250	.370	.289	99.984
6.00	.01563	.020	.016	100.000

SAMPLE IDENTIFICATION - AI-18:539.6 z=.66

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-2.00	4.00000	.000	.000	.000
-1.50	2.82843	6.790	5.579	5.579
-1.00	2.00000	3.740	3.073	8.652
-.50	1.41421	4.810	3.952	12.605
.00	1.00000	7.830	6.434	19.039
.50	.70711	11.730	9.638	28.677
1.00	.50000	19.930	16.376	45.053
1.50	.35355	18.370	15.094	60.148
2.00	.25000	19.110	15.703	75.850
2.50	.17678	17.000	13.969	89.819
3.00	.12500	10.750	8.833	98.652
3.50	.08839	1.540	1.265	99.918
4.00	.06250	.090	.074	99.992
6.00	.01563	.010	.008	100.000

SAMPLE IDENTIFICATION - AI-18:581.5, z=-1.75

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-2.00		.000	.000	.000
-1.50	2.82843	125.080	63.940	63.940
-1.00	2.00000	29.400	15.029	78.969
-.50	1.41421	22.390	11.446	90.415
.00	1.00000	5.210	2.663	93.078
.50	.70711	1.410	.721	93.799
1.00	.50000	1.700	.870	94.669
1.50	.35355	1.550	.792	95.461
2.00	.25000	2.140	1.094	96.555
2.50	.17678	2.710	1.385	97.940
3.00	.12500	3.260	1.666	99.606
3.50	.08839	.700	.358	99.964
4.00	.06250	.040	.020	100.000

(Continued)

(Sheet 1 of 2)

Profile AI-18 (Concluded)

SAMPLE IDENTIFICATION - AI-18:837.9 z=-5.71

PHI SIZE	MM	FRACTION WEIGHT	FRACTION ACCUMULATED PERCENT	FRACTION ACCUMULATED PERCENT
-2.00	4.00000	.000	.000	.000
-1.50	2.82843	.420	.440	.440
-1.00	2.00000	.390	.409	.848
-.50	1.41421	.540	.544	1.414
.00	1.00000	.490	.513	1.927
.50	.70711	.530	.555	2.482
1.00	.50000	1.060	1.110	3.593
1.50	.35355	1.680	1.760	5.352
2.00	.25000	4.770	4.996	10.349
2.50	.17678	10.440	10.935	21.284
3.00	.12500	51.820	54.279	75.563
3.50	.08839	20.000	20.949	96.512
4.00	.06250	3.260	3.415	99.927
6.00	.01563	.070	.073	100.000

SAMPLE IDENTIFICATION - AI-18:1648.1 z=-18.16

PHI SIZE	MM	FRACTION WEIGHT	FRACTION ACCUMULATED PERCENT	FRACTION ACCUMULATED PERCENT
-2.00	4.00000	.000	.000	.000
-1.50	2.82843	.700	.708	.708
-1.00	2.00000	.100	.101	.810
-.50	1.41421	.200	.202	1.012
.00	1.00000	.200	.202	1.214
.50	.70711	2.451	2.480	3.695
1.00	.50000	1.028	1.040	4.735
1.50	.35355	1.452	1.469	6.204
2.00	.25000	4.878	4.936	11.140
2.50	.17678	7.873	7.967	19.107
3.00	.12500	23.068	23.343	42.451
3.50	.08839	32.990	33.384	75.835
4.00	.06250	21.110	21.362	97.197
6.00	.01563	2.770	2.803	100.000

SAMPLE IDENTIFICATION - AI-18:2370.7 z=-23.74

PHI SIZE	MM	FRACTION WEIGHT	FRACTION ACCUMULATED PERCENT	FRACTION ACCUMULATED PERCENT
.00	1.00000	.000	.000	.000
.50	.70711	.240	.277	.277
1.00	.50000	.612	.706	.983
1.50	.35355	1.229	1.418	2.401
2.00	.25000	4.877	5.627	8.029
2.50	.17678	7.160	8.262	16.291
3.00	.12500	18.716	21.596	37.887
3.50	.08839	32.090	37.028	74.915
4.00	.06250	20.780	23.978	98.892
6.00	.01563	.960	1.108	100.000

SAMPLE IDENTIFICATION - SA AI-18:3349.1 z=-30.92

PHI SIZE	MM	FRACTION WEIGHT	FRACTION ACCUMULATED PERCENT	FRACTION ACCUMULATED PERCENT
-1.50	2.82843	.000	.000	.000
-1.00	2.00000	.020	.017	.017
-.50	1.41421	.290	.248	.265
.00	1.00000	1.820	1.538	1.823
.50	.70711	10.950	9.373	11.196
1.00	.50000	26.400	22.597	33.793
1.50	.35355	28.920	24.754	58.547
2.00	.25000	27.330	23.393	81.940
2.50	.17678	12.030	10.297	92.237
3.00	.12500	6.510	5.572	97.809
3.50	.08839	2.070	1.772	99.581
4.00	.06250	.480	.411	99.991
6.00	.01563	.010	.009	100.000

(Sheet 2 of 2)

Sediment Size Distribution--Profile AI-22

SAMPLE IDENTIFICATION - AI-22:775.5 z=1.94

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-1.50	2.82843	.000	.000	.000
-1.00	2.00000	.430	.365	.365
-.50	1.41421	.098	.083	.449
.00	1.00000	.320	.272	.721
.50	.70711	1.007	.854	1.574
1.00	.50000	5.372	4.564	6.140
1.50	.35355	23.819	20.238	26.378
2.00	.25000	52.270	44.411	70.789
2.50	.17678	22.090	18.769	89.558
3.00	.12500	10.760	9.142	98.700
3.50	.08839	1.440	1.223	99.924
4.00	.06250	.080	.068	99.992
6.00	.01563	.010	.008	100.000

SAMPLE IDENTIFICATION - AI-22:618.3 z=17.24

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-1.00	2.00000	.000	.000	.000
-.50	1.41421	.005	.005	.005
.00	1.00000	.050	.047	.052
.50	.70711	.895	.846	.897
1.00	.50000	7.494	7.080	7.977
1.50	.35355	22.058	20.839	28.816
2.00	.25000	44.930	42.446	71.262
2.50	.17678	21.190	20.019	91.280
3.00	.12500	7.190	6.793	98.073
3.50	.08839	1.910	1.804	99.877
4.00	.06250	.130	.123	100.000

SAMPLE IDENTIFICATION - AI-22:660.8 z=9.49

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-1.50	2.82843	.000	.000	.000
-1.00	2.00000	.010	.009	.009
-.50	1.41421	.050	.046	.055
.00	1.00000	.060	.055	.110
.50	.70711	.140	.129	.239
1.00	.50000	.890	.819	1.058
1.50	.35355	5.720	5.261	6.319
2.00	.25000	44.130	40.591	46.909
2.50	.17678	36.900	33.940	80.850
3.00	.12500	16.210	14.910	95.760
3.50	.08839	4.460	4.102	99.862
4.00	.06250	.140	.129	99.991
6.00	.01563	.010	.009	100.000

SAMPLE IDENTIFICATION - AI-22:769.2 z=2.23

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-1.00	2.00000	.000	.000	.000
-.50	1.41421	.030	.029	.029
.00	1.00000	.030	.029	.059
.50	.70711	.120	.117	.176
1.00	.50000	1.350	1.322	1.498
1.50	.35355	13.770	13.483	14.981
2.00	.25000	61.010	59.738	74.718
2.50	.17678	21.040	20.601	95.320
3.00	.12500	4.250	4.161	99.481
3.50	.08839	.410	.401	99.883
4.00	.06250	.120	.117	100.000

SAMPLE IDENTIFICATION - AI-22:787.1 z=.95

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-2.00	4.00000	.000	.000	.000
-1.50	2.82843	.273	.209	.209
-1.00	2.00000	.130	.100	.309
-.50	1.41421	.222	.170	.479
.00	1.00000	.489	.375	.854
.50	.70711	.865	.663	1.518
1.00	.50000	3.877	2.989	4.507
1.50	.35355	23.989	18.399	22.905
2.00	.25000	75.370	57.806	80.711
2.50	.17678	20.320	15.585	96.296
3.00	.12500	4.230	3.244	99.540
3.50	.08839	.530	.406	99.946
4.00	.06250	.060	.046	99.992
6.00	.01563	.010	.008	100.000

SAMPLE IDENTIFICATION - AI-22:822.4 z=-1.20

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-2.00	4.00000	.000	.000	.000
-1.50	2.82843	.660	.454	.454
-1.00	2.00000	.000	.000	.454
-.50	1.41421	.120	.083	.536
.00	1.00000	.260	.179	.715
.50	.70711	1.200	.825	1.541
1.00	.50000	7.510	5.165	6.706
1.50	.35355	39.210	26.969	33.675
2.00	.25000	75.970	52.253	85.928
2.50	.17678	16.210	11.149	97.077
3.00	.12500	3.610	2.483	99.560
3.50	.08839	.580	.399	99.959
4.00	.06250	.060	.041	100.000

(Continued)

(Sheet 1 of 2)

Profile AI-22 (Concluded)

SAMPLE IDENTIFICATION - AI-22:1075.7 z=-6.01

PHI SIZE	MM	FRACTION WEIGHT	FRACTION ACCUMULATED PERCENT	PERCENT
-2.00	4.00000	.000	.000	.000
-1.50	2.82843	.140	.131	.131
-1.00	2.00000	.110	.103	.234
-.50	1.41421	.170	.159	.394
.00	1.00000	.160	.150	.544
.50	.70711	.270	.253	.797
1.00	.50000	.380	.356	1.153
1.50	.35355	.870	.816	1.969
2.00	.25000	1.920	1.800	3.768
2.50	.17678	10.970	10.283	14.051
3.00	.12500	59.130	55.427	69.479
3.50	.08839	27.190	25.487	94.966
4.00	.06250	5.300	4.968	99.934
6.00	.01563	.070	.066	100.000

SAMPLE IDENTIFICATION - AI-22:1371.0 z=-11.69

PHI SIZE	MM	FRACTION WEIGHT	FRACTION ACCUMULATED PERCENT	PERCENT
-2.00	4.00000	.000	.000	.000
-1.50	2.82843	.630	.709	.709
-1.00	2.00000	.210	.236	.945
-.50	1.41421	.170	.191	1.137
.00	1.00000	.140	.158	1.294
.50	.70711	.250	.281	1.576
1.00	.50000	.190	.214	1.790
1.50	.35355	.220	.248	2.037
2.00	.25000	1.500	1.688	3.725
2.50	.17678	9.430	10.613	14.339
3.00	.12500	31.870	35.869	50.208
3.50	.08839	27.020	30.411	80.619
4.00	.06250	16.630	18.717	99.336
6.00	.01563	.590	.664	100.000

SAMPLE IDENTIFICATION - AI-22:1883.0 z=-19.30

PHI SIZE	MM	FRACTION WEIGHT	FRACTION ACCUMULATED PERCENT	PERCENT
-.50	1.41421	.000	.000	.000
.00	1.00000	.010	.014	.014
.50	.70711	.040	.056	.071
1.00	.50000	.130	.184	.254
1.50	.35355	.284	.401	.655
2.00	.25000	.709	1.001	1.656
2.50	.17678	1.761	2.486	4.142
3.00	.12500	11.115	15.691	19.832
3.50	.08839	34.090	48.123	67.956
4.00	.06250	22.010	31.070	99.026
6.00	.01563	.690	.974	100.000

SAMPLE IDENTIFICATION - AI-22:2290.5 z=-24.16

PHI SIZE	MM	FRACTION WEIGHT	FRACTION ACCUMULATED PERCENT	PERCENT
.50	.70711	.000	.000	.000
1.00	.50000	.109	.126	.126
1.50	.35355	.326	.376	.502
2.00	.25000	1.271	1.466	1.968
2.50	.17678	3.191	3.681	5.649
3.00	.12500	10.799	12.458	18.107
3.50	.08839	43.170	49.800	67.907
4.00	.06250	26.640	30.732	98.639
6.00	.01563	1.180	1.361	100.000

SAMPLE IDENTIFICATION - AI-22:3057.1 z=-30.22

PHI SIZE	MM	FRACTION WEIGHT	FRACTION ACCUMULATED PERCENT	PERCENT
-.50	1.41421	.000	.000	.000
.00	1.00000	.060	.062	.062
.50	.70711	.160	.165	.227
1.00	.50000	.220	.227	.453
1.50	.35355	.240	.247	.701
2.00	.25000	2.730	2.814	3.514
2.50	.17678	9.350	9.636	13.151
3.00	.12500	16.430	16.933	30.083
3.50	.08839	34.880	35.948	66.031
4.00	.06250	30.080	31.001	97.032
6.00	.01563	2.880	2.968	100.000

(Sheet 2 of 2)

Sediment Size Distribution--Profile AI-26

SAMPLE IDENTIFICATION - AI-26:329.5 z=8.33

PHI SIZE	MM	FRACTION WEIGHT	FRACTION ACCUMULATED PERCENT	PERCENT
.00	1.00000	.000	.000	.000
.50	.70711	.017	.013	.013
1.00	.50000	.040	.030	.043
1.50	.35355	.296	.222	.264
2.00	.25000	4.697	3.516	3.780
2.50	.17678	23.780	17.799	21.579
3.00	.12500	89.010	66.624	88.204
3.50	.08839	15.460	11.572	99.775
4.00	.06250	.300	.225	100.000

SAMPLE IDENTIFICATION - AI-26:399.6 z=6.18

PHI SIZE	MM	FRACTION WEIGHT	FRACTION ACCUMULATED PERCENT	PERCENT
-1.50	2.82843	.000	.000	.000
-1.00	2.00000	.030	.026	.026
-.50	1.41421	.020	.017	.043
.00	1.00000	.020	.017	.060
.50	.70711	.370	.318	.378
1.00	.50000	6.090	5.232	5.609
1.50	.35355	21.010	18.048	23.658
2.00	.25000	56.920	48.896	72.554
2.50	.17678	26.330	22.636	95.189
3.00	.12500	5.030	4.321	99.510
3.50	.08839	.520	.447	99.957
4.00	.06250	.030	.043	100.000

SAMPLE IDENTIFICATION - AI-26:331.8 z=11.52

PHI SIZE	MM	FRACTION WEIGHT	FRACTION ACCUMULATED PERCENT	PERCENT
.50	.70711	.000	.000	.000
1.00	.50000	.420	.437	.437
1.50	.35355	6.790	7.071	7.509
2.00	.25000	36.600	38.117	45.626
2.50	.17678	35.260	36.722	82.347
3.00	.12500	14.140	14.726	97.074
3.50	.08839	2.730	2.864	99.938
4.00	.06250	.060	.062	100.000

SAMPLE IDENTIFICATION - AI-26:424.1 z=4.28

PHI SIZE	MM	FRACTION WEIGHT	FRACTION ACCUMULATED PERCENT	PERCENT
-1.50	2.82843	.000	.000	.000
-1.00	2.00000	.070	.062	.062
-.50	1.41421	.010	.009	.070
.00	1.00000	.020	.018	.088
.50	.70711	.030	.026	.114
1.00	.50000	.911	.802	.916
1.50	.35355	9.074	7.987	8.904
2.00	.25000	51.560	45.385	54.289
2.50	.17678	29.490	25.958	80.247
3.00	.12500	15.390	13.547	93.794
3.50	.08839	6.520	5.739	99.533
4.00	.06250	.530	.467	100.000

SAMPLE IDENTIFICATION - AI-26:362 z=7.28

PHI SIZE	MM	FRACTION WEIGHT	FRACTION ACCUMULATED PERCENT	PERCENT
-.50	1.41421	.000	.000	.000
.00	1.00000	.030	.041	.041
.50	.70711	.220	.303	.344
1.00	.50000	1.710	2.354	2.699
1.50	.35355	8.070	11.111	13.810
2.00	.25000	34.810	47.928	61.738
2.50	.17678	22.260	30.648	92.386
3.00	.12500	4.660	6.416	98.802
3.50	.08839	.780	1.074	99.876
4.00	.06250	.070	.096	99.972
6.00	.01563	.020	.028	100.000

SAMPLE IDENTIFICATION - AI-26:452.6 z=1.86

PHI SIZE	MM	FRACTION WEIGHT	FRACTION ACCUMULATED PERCENT	PERCENT
-2.00	4.00000	.000	.000	.000
-1.50	2.82843	.109	.094	.094
-1.00	2.00000	.311	.268	.361
-.50	1.41421	.712	.612	.974
.00	1.00000	1.533	1.319	2.293
.50	.70711	3.471	2.986	5.279
1.00	.50000	11.602	9.981	15.259
1.50	.35355	29.507	25.383	40.643
2.00	.25000	45.420	39.073	79.715
2.50	.17678	16.210	13.945	93.660
3.00	.12500	5.900	5.075	98.735
3.50	.08839	1.340	1.153	99.888
4.00	.06250	.130	.112	100.000

(Continued)

(Sheet 1 of 3)

Profile AI-26

SAMPLE IDENTIFICATION - AI-26:458.2 z=1.25

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-1.50	2.82843	.000	.000	.000
-1.00	2.00000	.060	.057	.057
-.50	1.41421	.420	.398	.455
.00	1.00000	2.170	2.057	2.513
.50	.70711	6.370	6.040	8.552
1.00	.50000	10.640	10.088	18.640
1.50	.35355	18.110	17.171	35.811
2.00	.25000	36.690	34.787	70.598
2.50	.17678	23.390	22.177	92.775
3.00	.12500	7.090	6.722	99.497
3.50	.08839	.440	.417	99.915
4.00	.06250	.070	.066	99.981
6.00	.01563	.020	.019	100.000

SAMPLE IDENTIFICATION - AI-26:501.0 z=-1.89

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-2.00	4.00000	.000	.000	.000
-1.50	2.82843	12.220	10.065	10.065
-1.00	2.00000	2.960	2.438	12.503
-.50	1.41421	3.020	2.487	14.991
.00	1.00000	3.000	2.471	17.461
.50	.70711	4.160	3.426	20.888
1.00	.50000	9.380	7.726	28.614
1.50	.35355	17.890	14.735	43.349
2.00	.25000	38.360	31.595	74.944
2.50	.17678	22.450	18.491	93.435
3.00	.12500	7.140	5.881	99.316
3.50	.08839	.770	.634	99.951
4.00	.06250	.060	.049	100.000

SAMPLE IDENTIFICATION - AI-26:846.5 z=-5.56

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-2.00	4.00000	.000	.000	.000
-1.50	2.82843	.490	.400	.400
-1.00	2.00000	.550	.448	.848
-.50	1.41421	.780	.636	1.484
.00	1.00000	1.331	1.085	2.569
.50	.70711	3.358	2.738	5.307
1.00	.50000	7.358	5.999	11.306
1.50	.35355	11.626	9.479	20.785
2.00	.25000	27.179	22.159	42.944
2.50	.17678	33.150	27.028	69.972
3.00	.12500	30.700	25.030	95.002
3.50	.08839	5.610	4.574	99.576
4.00	.06250	.490	.400	99.976
6.00	.01563	.030	.024	100.000

SAMPLE IDENTIFICATION - AI-26:1084.75 z=-11.95

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-2.00	4.00000	.000	.000	.000
-1.50	2.82843	.670	.648	.648
-1.00	2.00000	.130	.126	.774
-.50	1.41421	.130	.126	.900
.00	1.00000	.070	.068	.968
.50	.70711	.090	.087	1.055
1.00	.50000	.230	.223	1.277
1.50	.35355	.770	.745	2.022
2.00	.25000	6.860	6.638	8.660
2.50	.17678	39.100	37.833	46.493
3.00	.12500	45.510	44.035	90.527
3.50	.08839	7.990	7.731	98.258
4.00	.06250	1.740	1.684	99.942
6.00	.01563	.060	.058	100.000

SAMPLE IDENTIFICATION - AI-26:1414.0 z=-18.78

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-1.00	2.00000	.000	.000	.000
-.50	1.41421	.006	.008	.008
.00	1.00000	.012	.017	.025
.50	.70711	.033	.046	.071
1.00	.50000	.030	.042	.113
1.50	.35355	.061	.085	.198
2.00	.25000	.263	.367	.566
2.50	.17678	2.191	3.061	3.626
3.00	.12500	22.130	30.914	34.540
3.50	.08839	34.540	48.250	82.790
4.00	.06250	11.860	16.567	99.357
6.00	.01563	.460	.643	100.000

SAMPLE IDENTIFICATION - AI-26:1778.0 z=-23.65

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
.00	1.00000	.000	.000	.000
.50	.70711	.020	.023	.023
1.00	.50000	.030	.034	.057
1.50	.35355	.020	.023	.080
2.00	.25000	.100	.115	.195
2.50	.17678	.620	.710	.905
3.00	.12500	11.460	13.132	14.037
3.50	.08839	50.860	58.279	72.316
4.00	.06250	22.730	26.046	98.361
6.00	.01563	1.430	1.639	100.000

(Continued)

(Sheet 2 of 3)

Profile AI-26 (Concluded)

SAMPLE IDENTIFICATION - AI-2612366.0 z=-30.13

PHI SIZE	MM	FRACTION WEIGHT	FRACTION ACCUMULATED PERCENT	PERCENT
.00	1.00000	.000	.000	.000
.50	.70711	.040	.051	.051
1.00	.50000	.040	.051	.102
1.50	.35335	.030	.038	.141
2.00	.25000	.180	.230	.371
2.50	.17678	.470	.601	.972
3.00	.12500	7.000	8.951	9.923
3.50	.08839	39.410	50.396	60.320
4.00	.06250	29.330	37.506	97.826
6.00	.01563	1.700	2.174	100.000

(Sheet 3 of 3)

Sediment Size Distribution--Profile AI-30

SAMPLE IDENTIFICATION - AI-30:907.5 z=18.90

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	FRACTION ACCUMULATED PERCENT
-1.50	1.41421	.000	.000	.000
.00	1.00000	.330	.323	.323
.50	.70711	6.190	6.063	6.386
1.00	.50000	20.070	19.657	26.043
1.50	.35355	24.430	23.928	49.971
2.00	.25000	31.520	30.872	80.842
2.50	.17678	12.790	12.527	93.369
3.00	.12500	5.440	5.328	98.697
3.50	.08839	1.290	1.263	99.961
4.00	.06250	.040	.039	100.000

SAMPLE IDENTIFICATION - AI-30:1035.3 z=5.56

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	FRACTION ACCUMULATED PERCENT
-1.00	2.00000	.000	.000	.000
-.50	1.41421	.030	.024	.024
.00	1.00000	1.250	1.007	1.032
.50	.70711	6.110	4.924	5.955
1.00	.50000	16.650	13.418	19.373
1.50	.35355	28.160	22.691	42.064
2.00	.25000	45.160	36.393	78.459
2.50	.17678	21.450	17.284	95.743
3.00	.12500	4.800	3.868	99.613
3.50	.08839	.450	.363	99.976
4.00	.06250	.030	.024	100.000

SAMPLE IDENTIFICATION - AI-30:953.6 z=9.85

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	FRACTION ACCUMULATED PERCENT
-1.00	2.00000	.000	.000	.000
-.50	1.41421	.020	.022	.022
.00	1.00000	.107	.117	.139
.50	.70711	.618	.676	.815
1.00	.50000	3.678	4.026	4.841
1.50	.35355	16.371	17.918	22.760
2.00	.25000	43.050	47.119	69.879
2.50	.17678	15.650	17.129	87.008
3.00	.12500	9.190	10.059	97.067
3.50	.08839	2.580	2.824	99.891
4.00	.06250	.100	.109	100.000

SAMPLE IDENTIFICATION - AI-30:1100.4 z=.94

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	FRACTION ACCUMULATED PERCENT
-1.50	2.82843	.000	.000	.000
-1.00	2.00000	.060	.063	.063
-.50	1.41421	.340	.355	.417
.00	1.00000	1.340	1.399	1.816
.50	.70711	5.510	5.751	7.567
1.00	.50000	13.790	14.393	21.960
1.50	.35355	20.670	21.574	43.534
2.00	.25000	32.780	34.214	77.748
2.50	.17678	17.490	18.255	96.003
3.00	.12500	3.550	3.705	99.708
3.50	.08839	.190	.198	99.906
4.00	.06250	.060	.063	99.969
6.00	.01563	.030	.031	100.000

SAMPLE IDENTIFICATION - AI-30:964.5 z=7.64

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	FRACTION ACCUMULATED PERCENT
-1.50	2.82843	.000	.000	.000
-1.00	2.00000	.100	.069	.069
-.50	1.41421	.740	.507	.576
.00	1.00000	7.710	5.284	5.859
.50	.70711	14.670	10.053	15.913
1.00	.50000	10.330	7.079	22.992
1.50	.35355	14.190	9.725	32.717
2.00	.25000	20.110	13.782	46.498
2.50	.17678	17.090	11.712	58.210
3.00	.12500	44.170	30.270	88.480
3.50	.08839	16.330	11.191	99.671
4.00	.06250	.470	.322	99.993
6.00	.01563	.010	.007	100.000

SAMPLE IDENTIFICATION - AI-30:1132.2 z=-1.02

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	FRACTION ACCUMULATED PERCENT
-2.00	4.00000	.000	.000	.000
-1.50	2.82843	1.960	2.003	2.003
-1.00	2.00000	1.080	1.104	3.107
-.50	1.41421	2.760	2.821	5.927
.00	1.00000	7.230	7.389	13.316
.50	.70711	12.990	13.275	26.592
1.00	.50000	15.930	16.280	42.872
1.50	.35355	15.530	15.871	58.743
2.00	.25000	22.250	22.739	81.482
2.50	.17678	14.530	14.849	96.331
3.00	.12500	3.360	3.434	99.765
3.50	.08839	.200	.204	99.969
4.00	.06250	.030	.031	100.000

(Continued)

(Sheet 1 of 2)

Profile AI-30 (Concluded)

SAMPLE IDENTIFICATION - AI-30:1613.6 z=-9.62

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-2.00	4.00000	.000	.000	.000
-1.50	2.82843	1.093	1.044	1.044
-1.00	2.00000	.358	.332	1.576
-.50	1.41421	.956	.911	2.487
.00	1.00000	2.400	2.288	4.775
.50	.70711	7.723	7.363	12.138
1.00	.50000	15.942	15.198	27.336
1.50	.35355	20.513	19.356	46.692
2.00	.25000	29.217	27.854	74.746
2.50	.17678	17.690	16.865	91.611
3.00	.12500	7.210	6.874	98.484
3.50	.08839	1.360	1.297	99.781
4.00	.06250	.210	.200	99.981
6.00	.01563	.020	.019	100.000

SAMPLE IDENTIFICATION - AI-30:3009.5 z=-30.70

PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-.50	1.41421	.000	.000	.000
.00	1.00000	.063	.068	.068
.50	.70711	.164	.177	.246
1.00	.50000	.264	.286	.531
1.50	.35355	.225	.243	.775
2.00	.25000	.719	.778	1.552
2.50	.17678	1.857	2.009	3.561
3.00	.12500	14.582	15.774	19.335
3.50	.08839	49.450	53.492	72.827
4.00	.06250	20.890	22.597	95.424
6.00	.01563	4.230	4.576	100.000

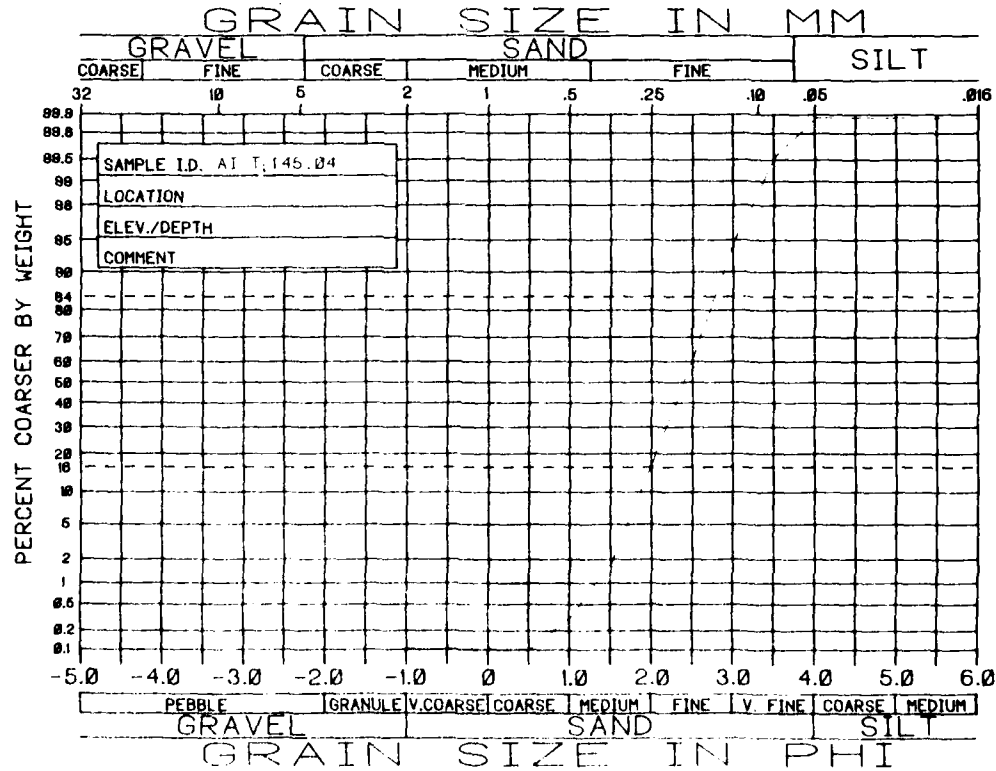
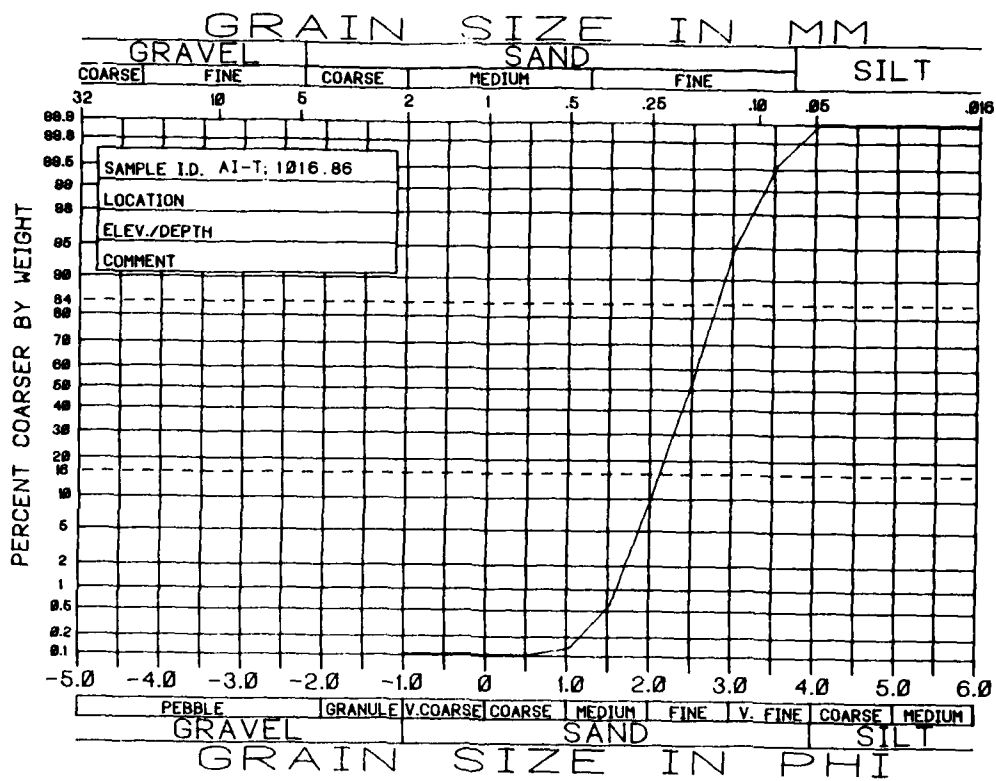
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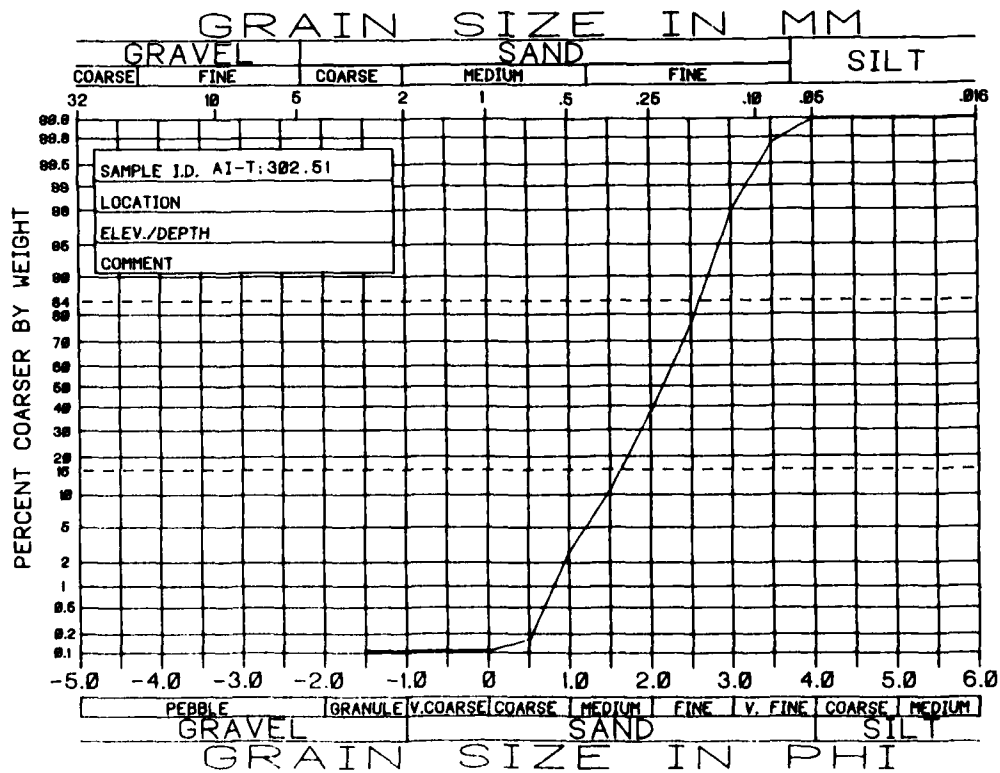
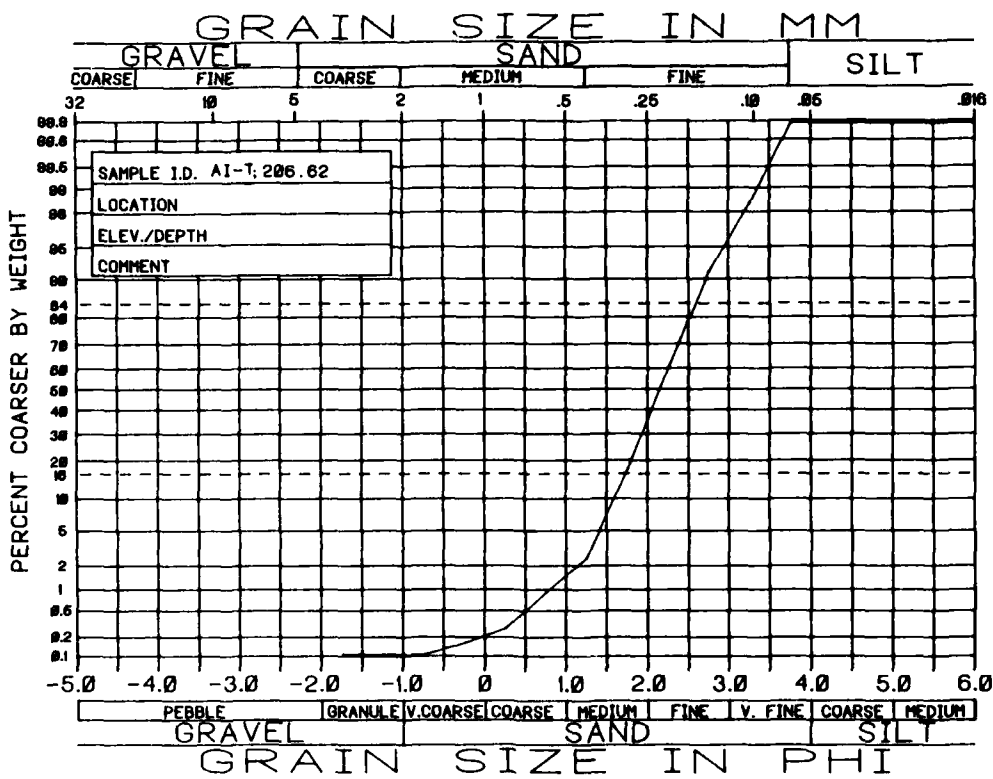
PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-.50	1.41421	.000	.000	.000
.00	1.00000	.050	.066	.066
.50	.70711	.100	.131	.197
1.00	.50000	.240	.315	.511
1.50	.35355	.670	.878	1.390
2.00	.25000	5.720	7.499	8.888
2.50	.17678	24.100	31.594	40.482
3.00	.12500	37.170	48.728	89.211
3.50	.08839	6.950	9.111	98.322
4.00	.06250	1.210	1.586	99.908
6.00	.01563	.070	.092	100.000

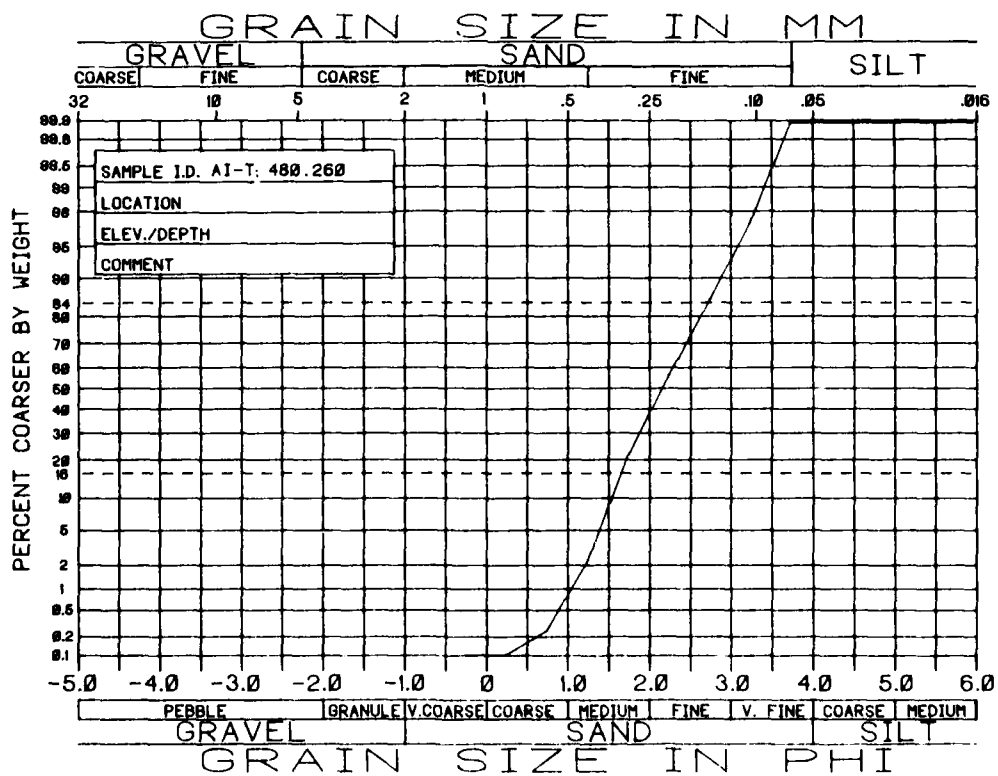
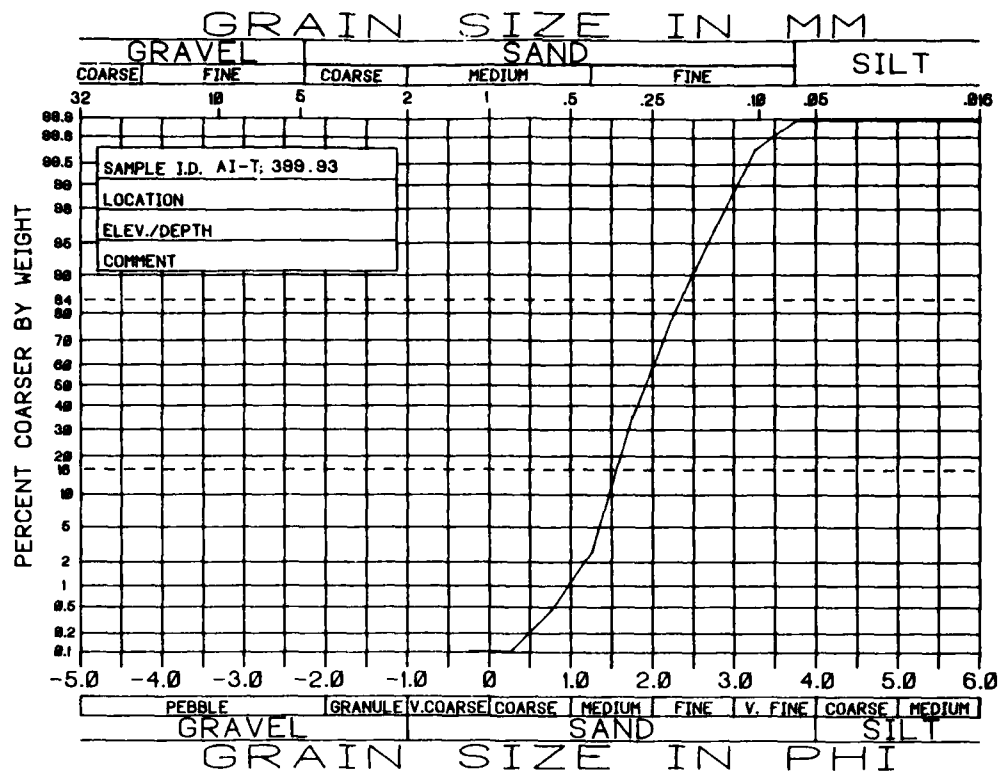
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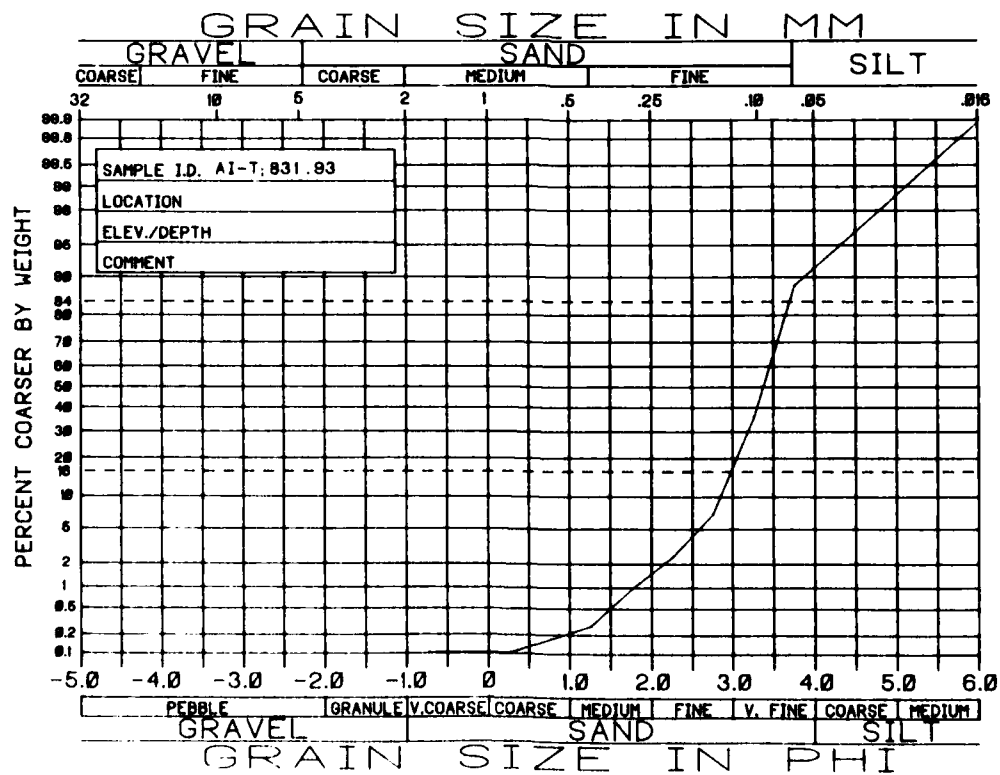
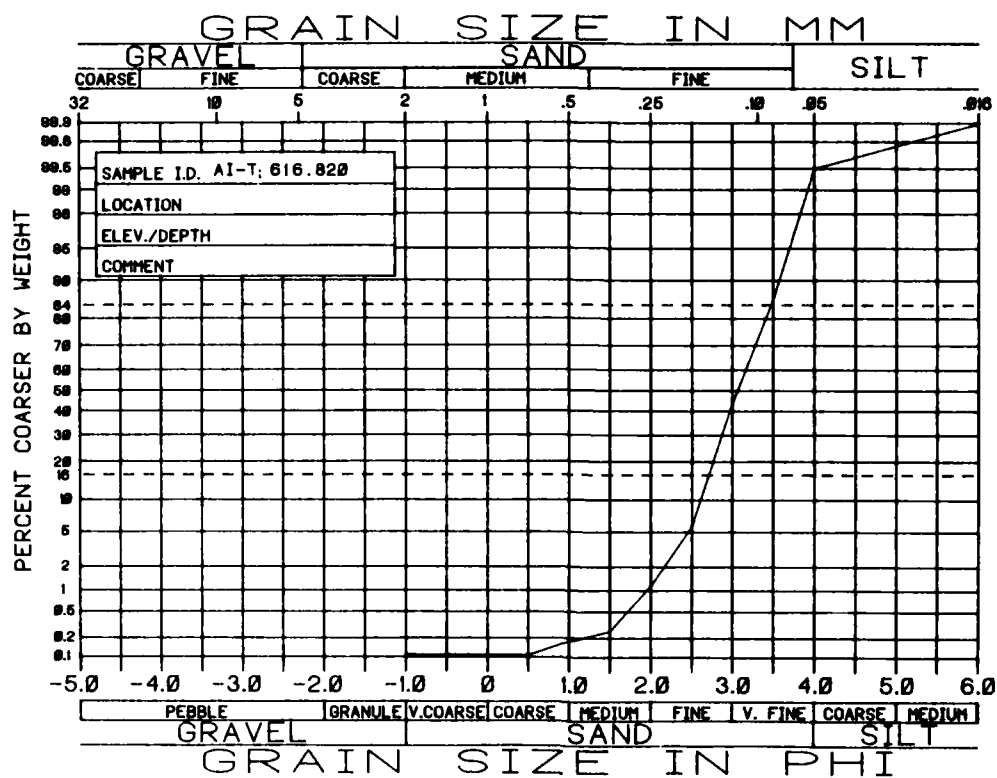
PHI SIZE	MM	FRACTION WEIGHT	FRACTION PERCENT	ACCUMULATED PERCENT
-1.00	2.00000	.000	.000	.000
-.50	1.41421	.070	.100	.100
.00	1.00000	.160	.228	.328
.50	.70711	.280	.399	.726
1.00	.50000	.260	.370	1.097
1.50	.35355	.160	.228	1.325
2.00	.25000	.660	.940	2.265
2.50	.17678	1.640	2.336	4.601
3.00	.12500	16.210	23.091	27.692
3.50	.08839	37.990	54.117	81.809
4.00	.06250	11.940	17.009	98.818
6.00	.01563	.830	1.182	100.000

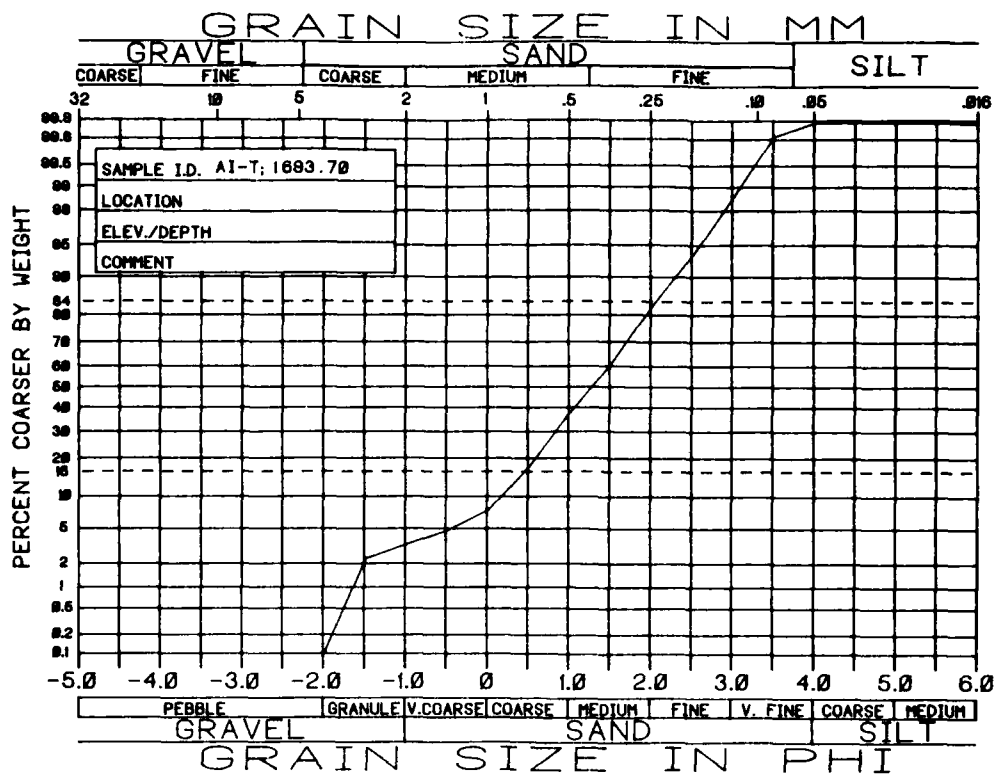
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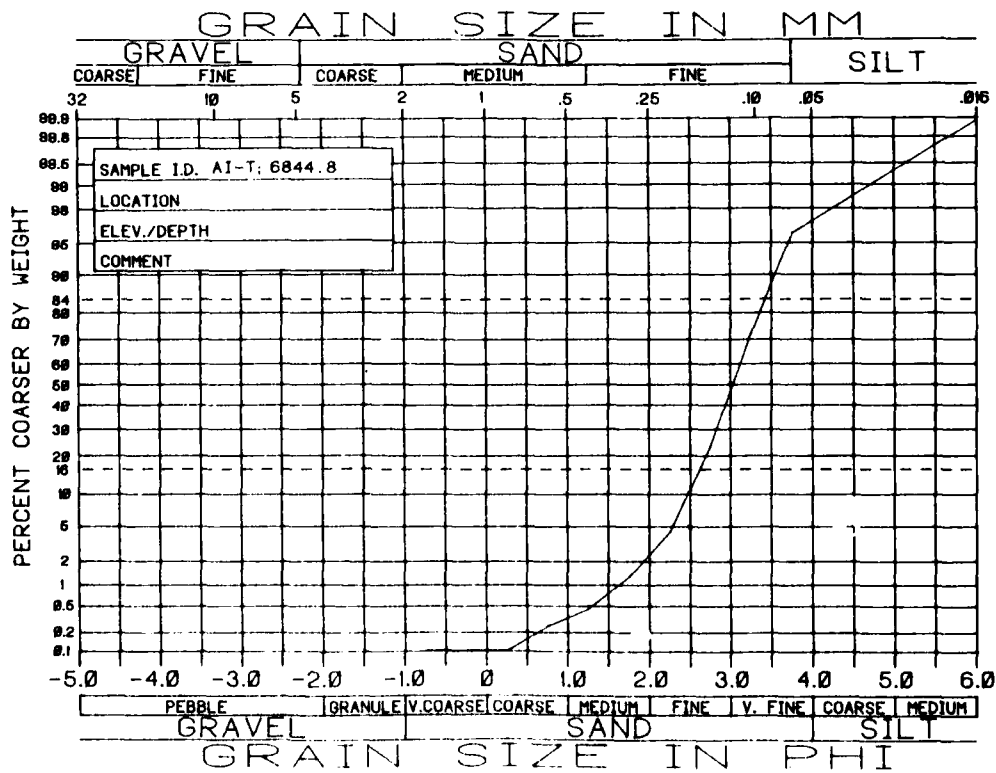
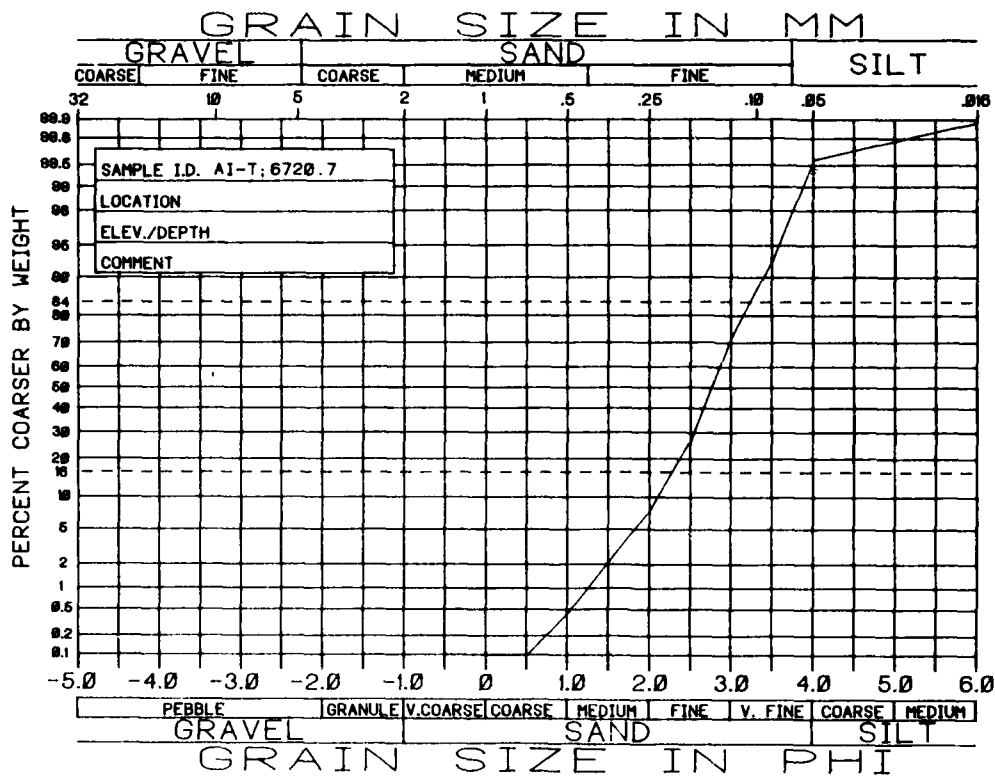


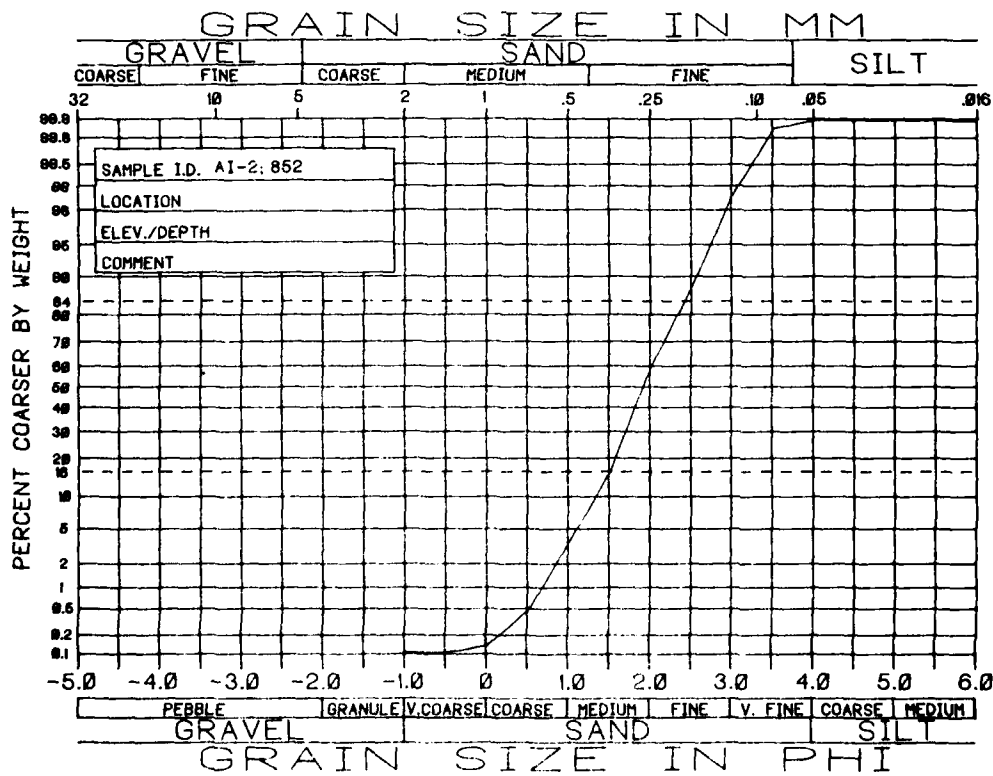
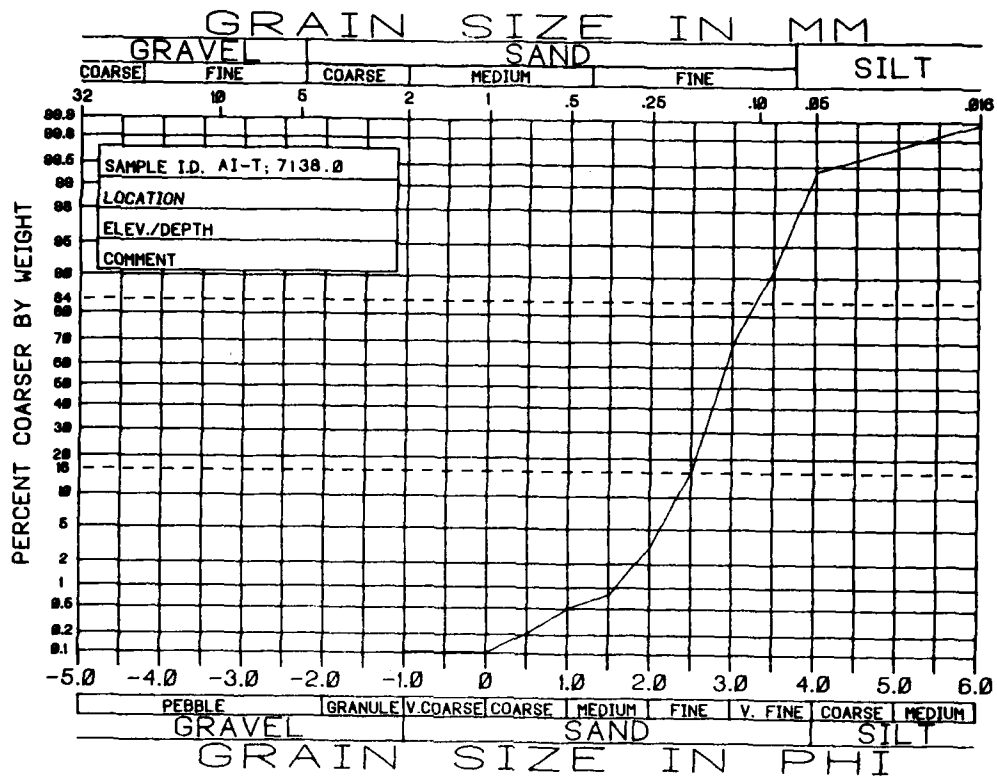


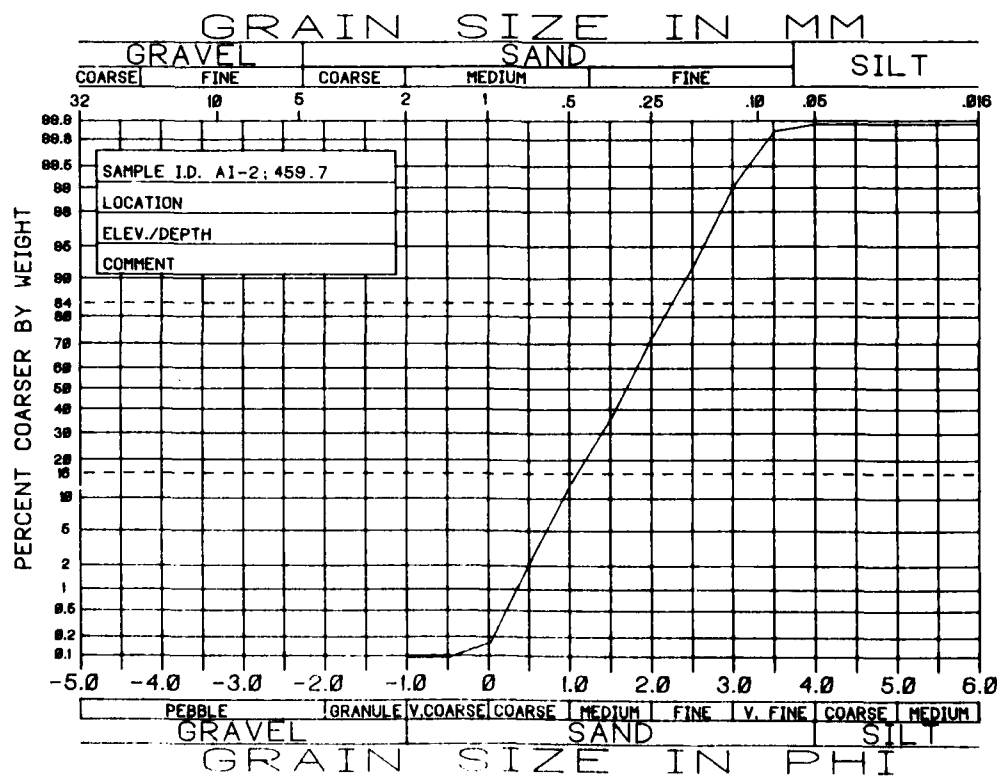
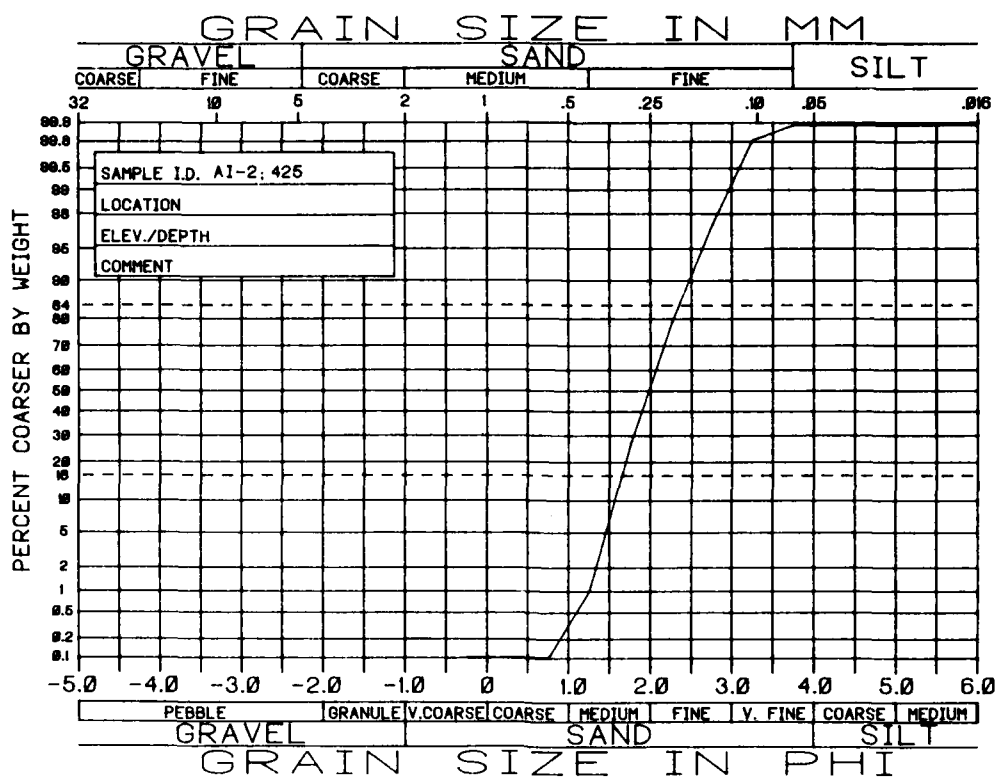


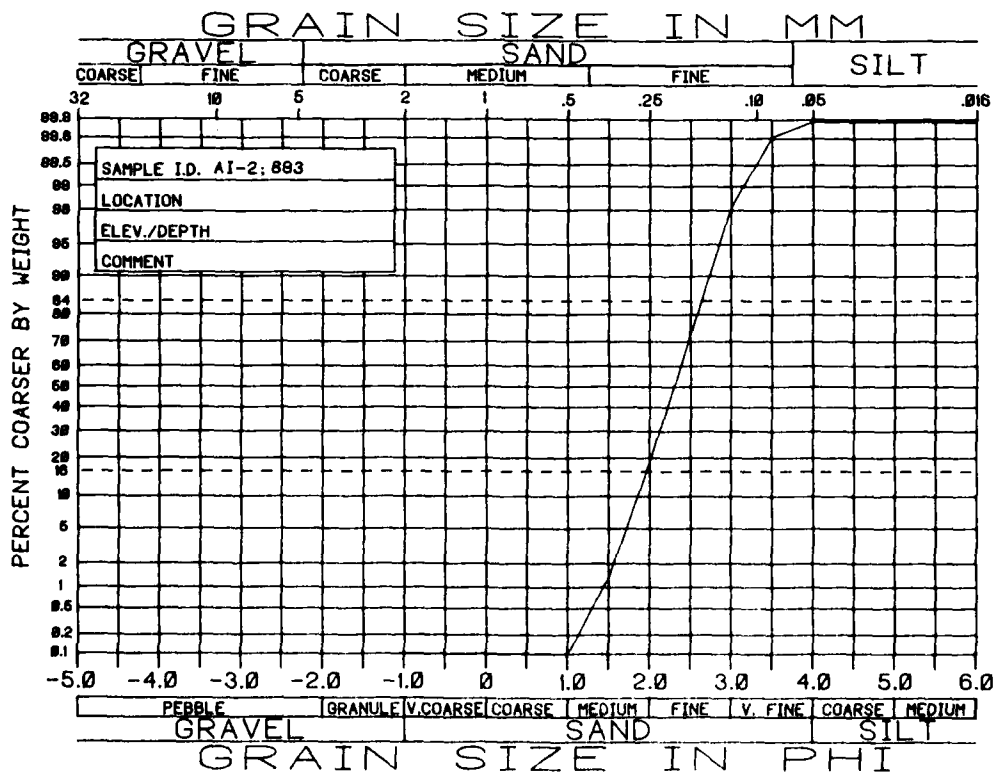
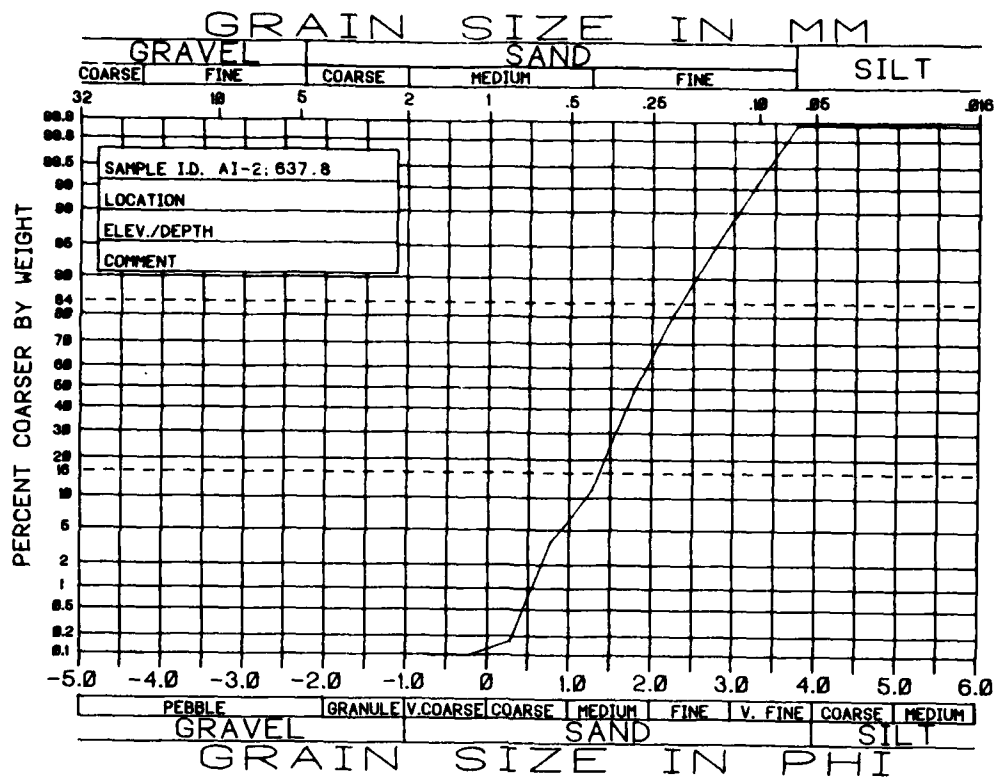


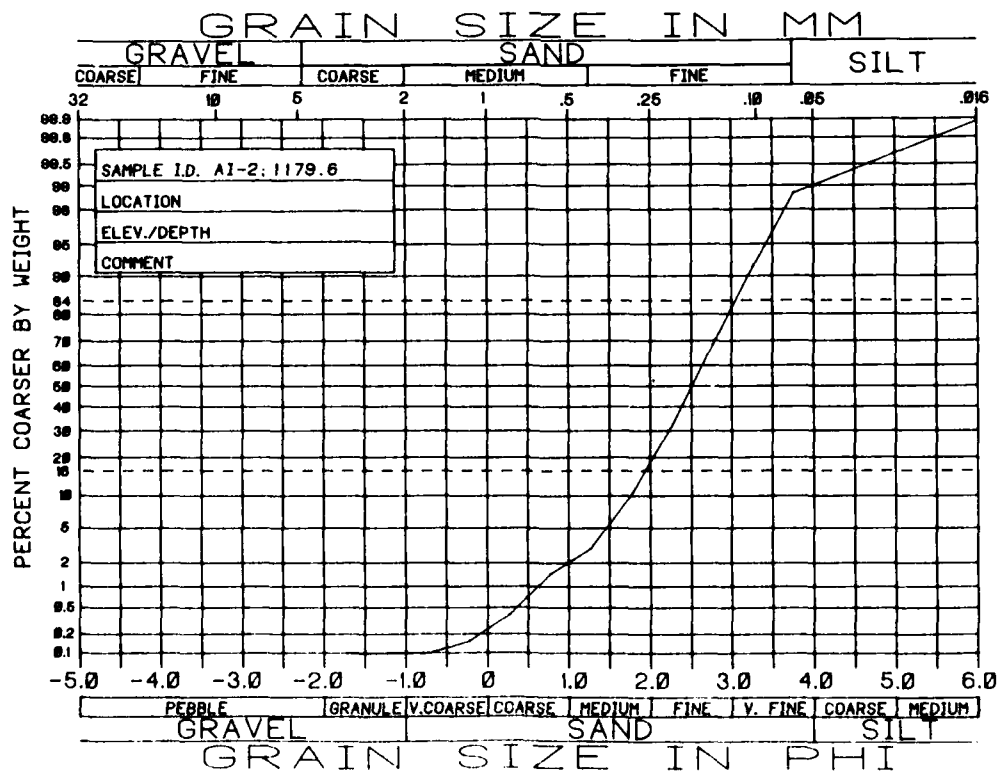
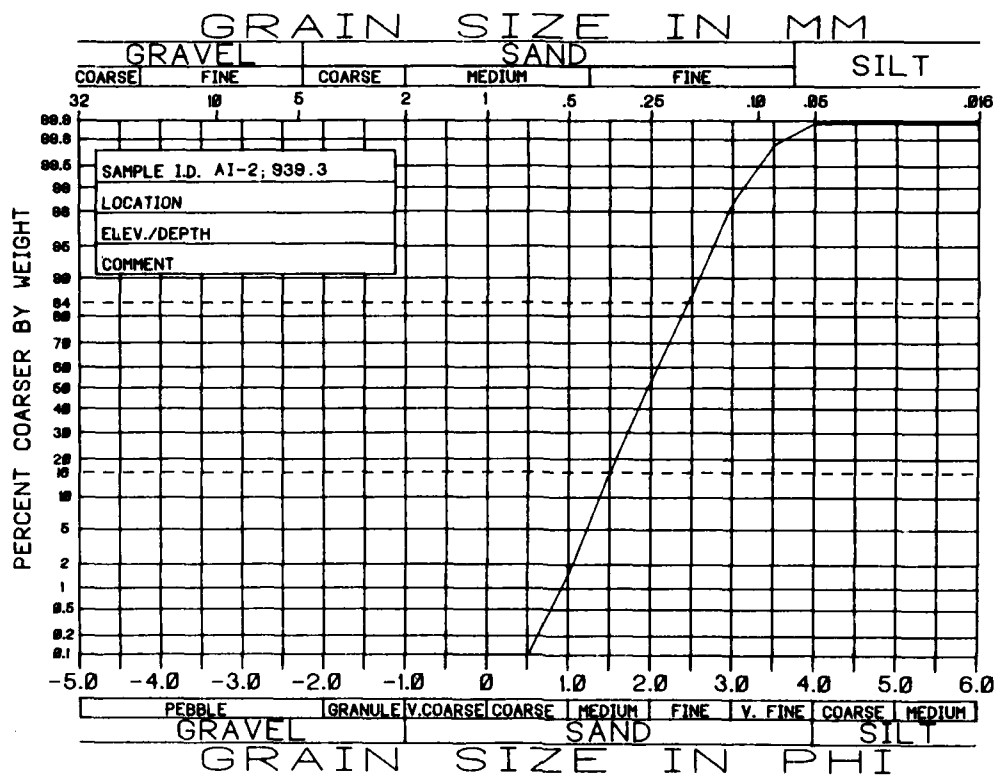


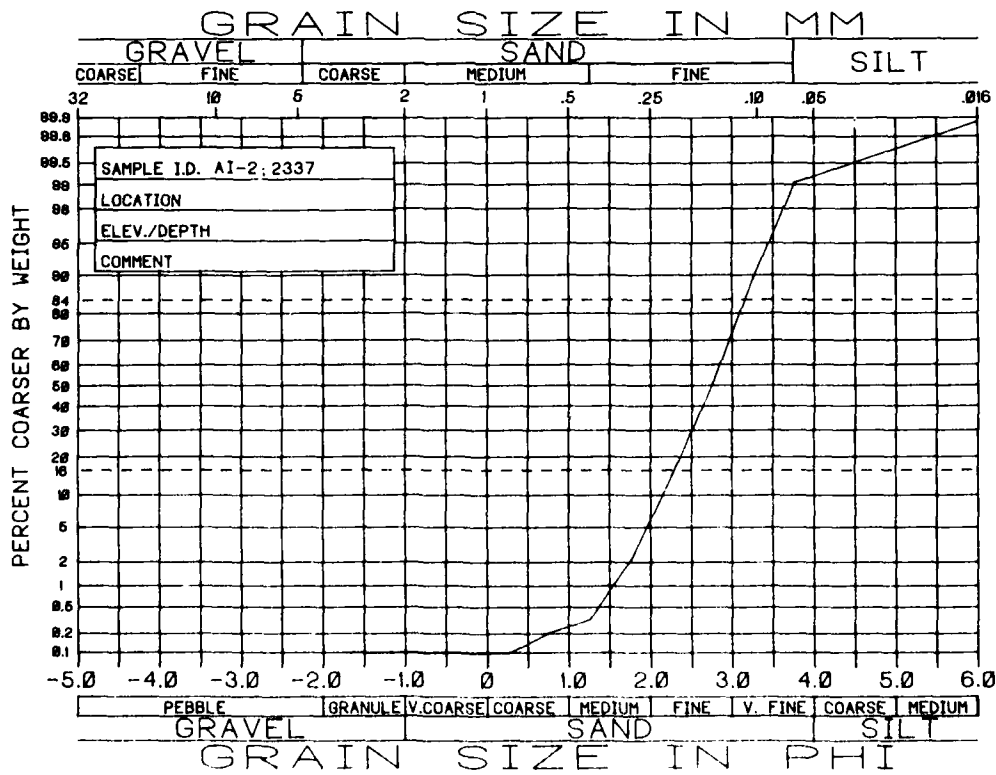
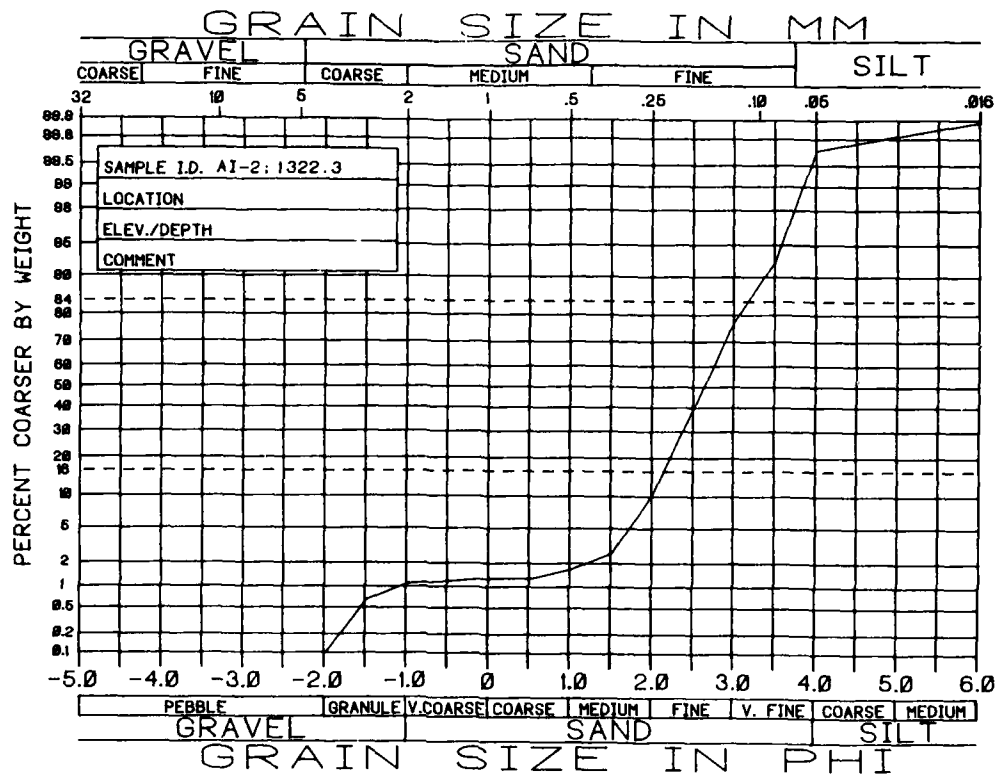


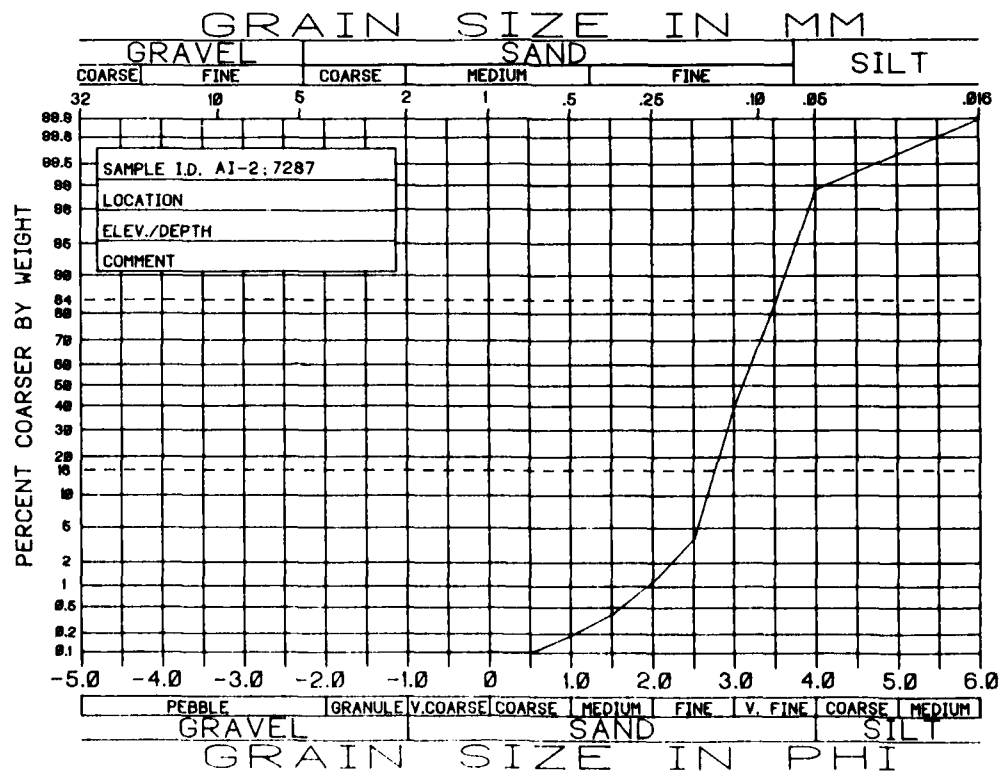
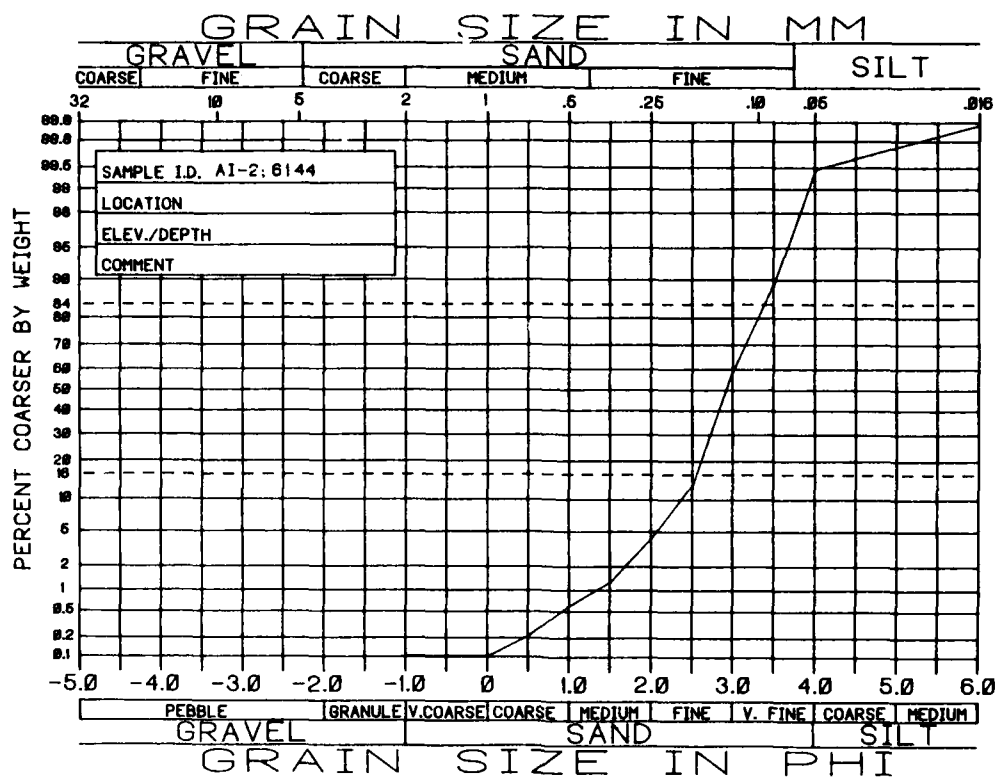


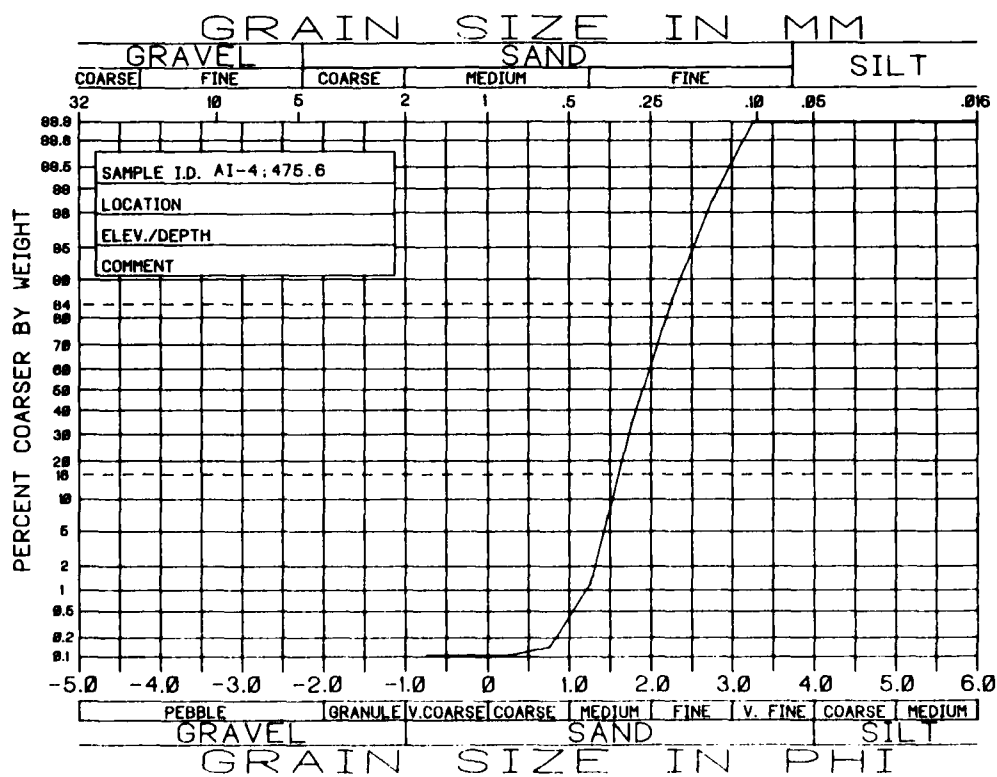
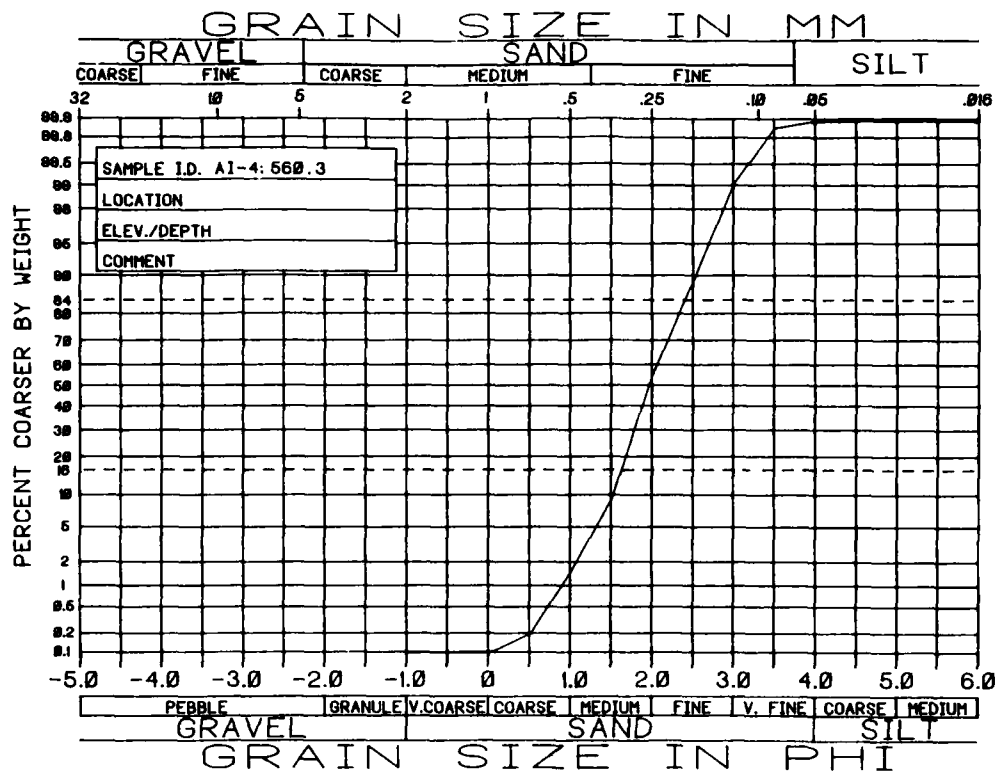


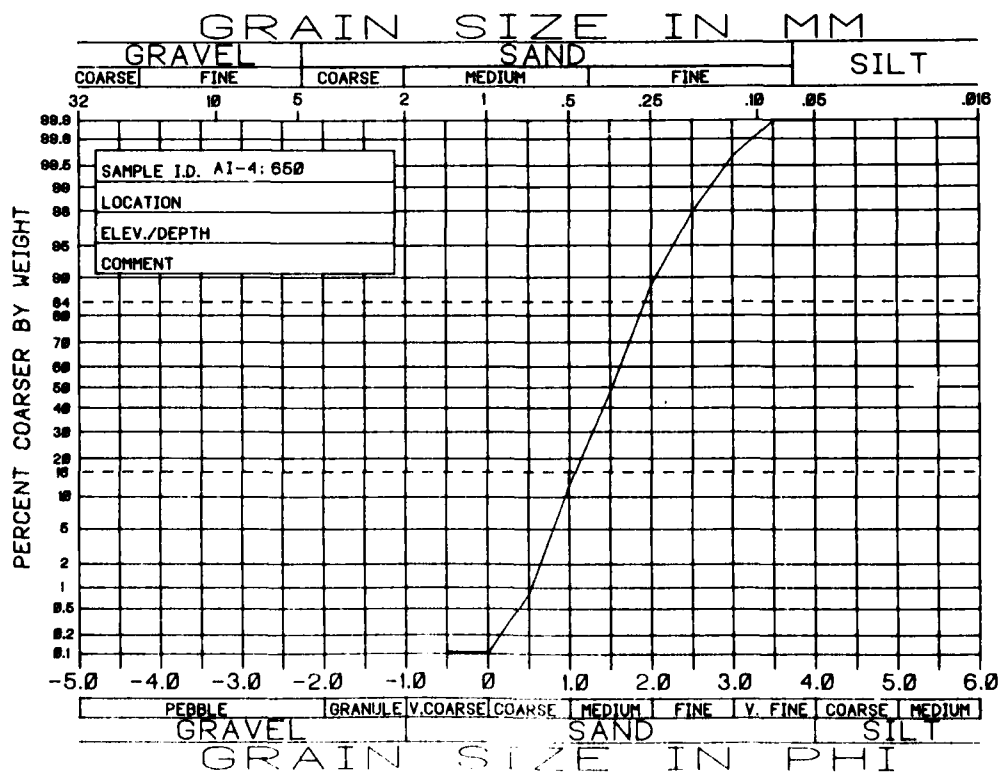
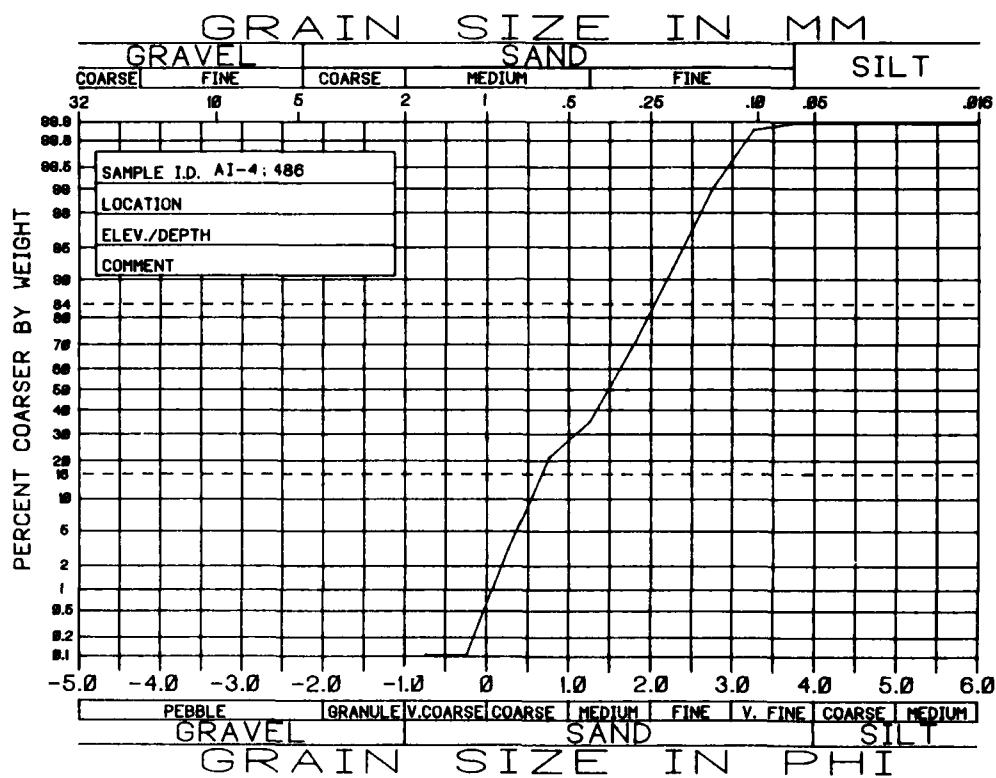


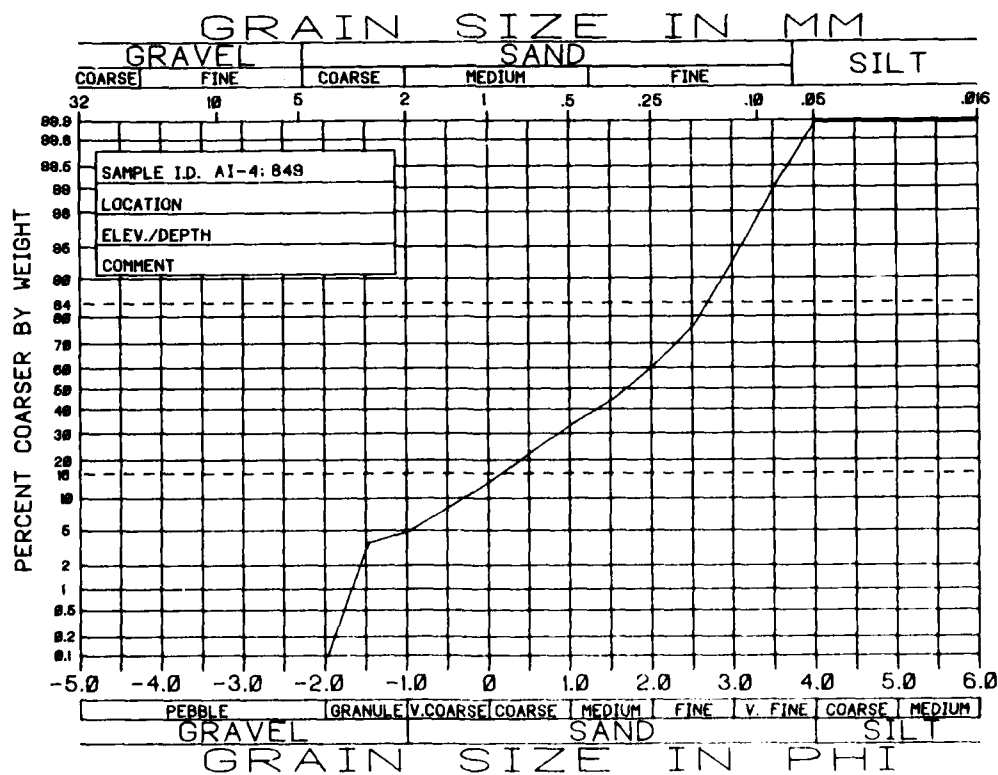
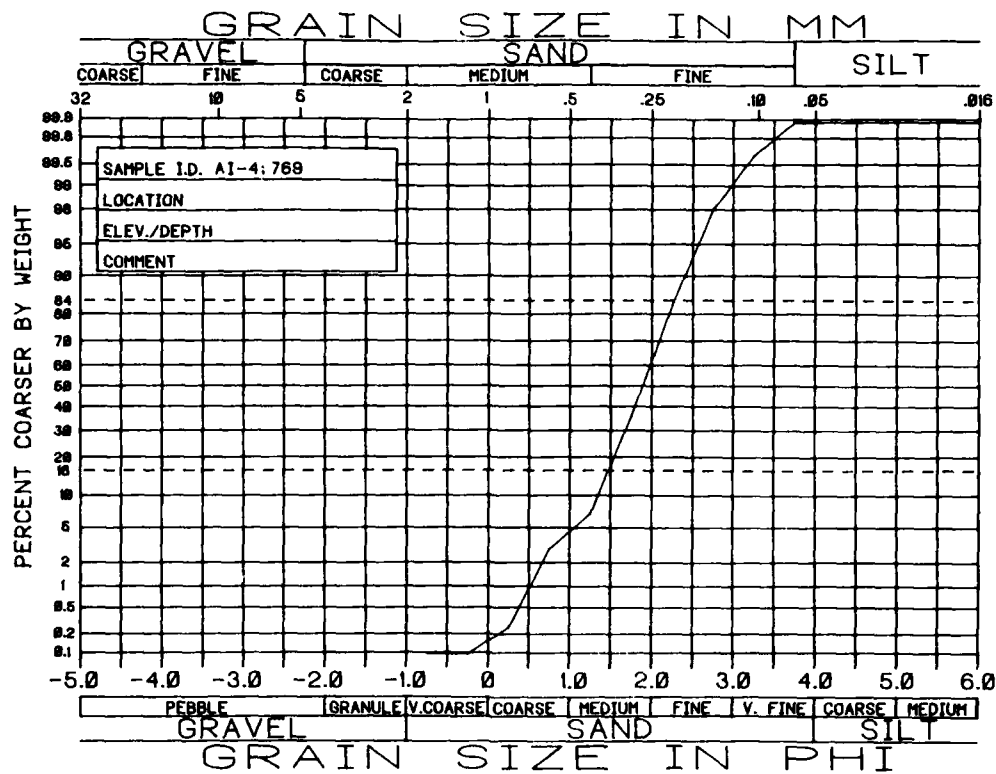


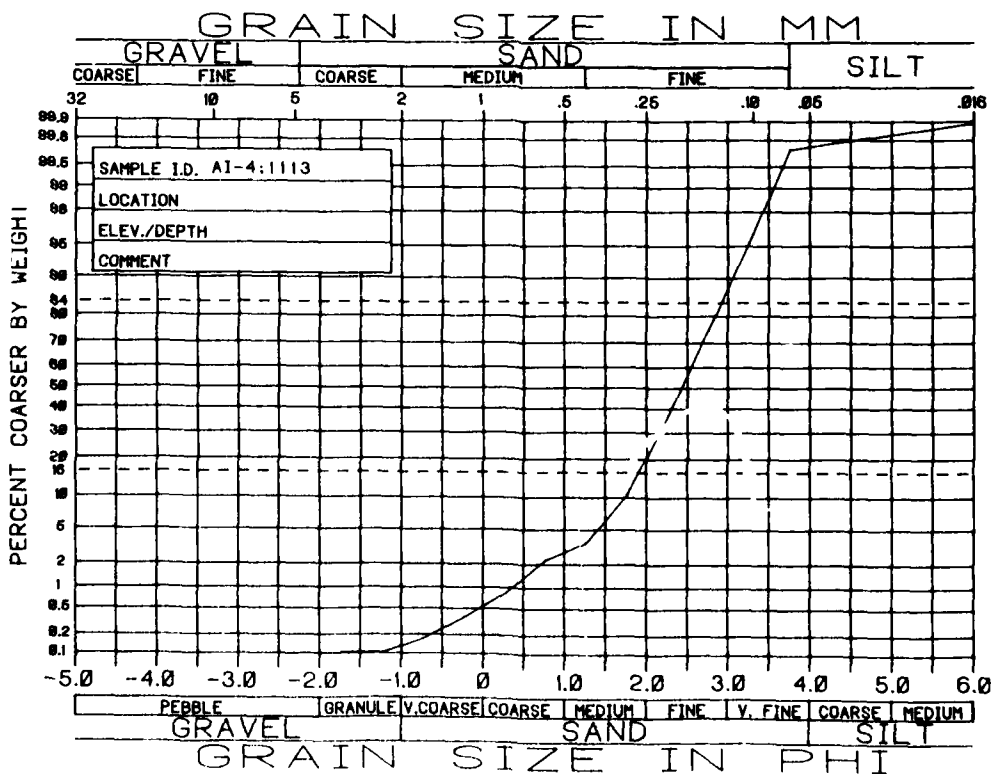
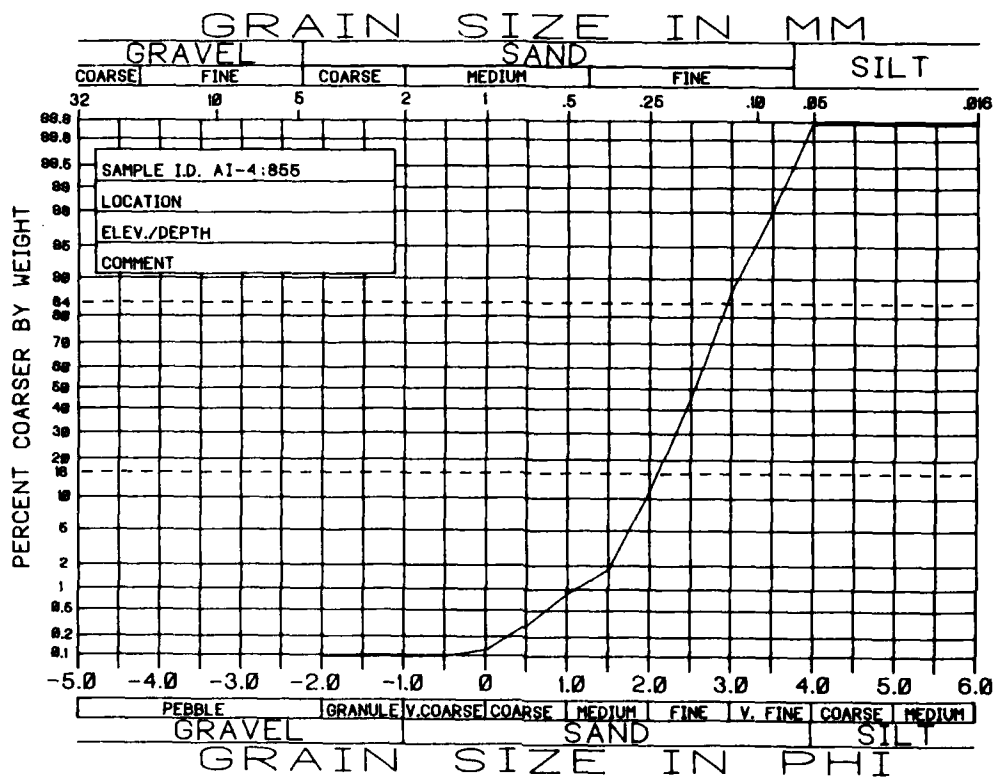


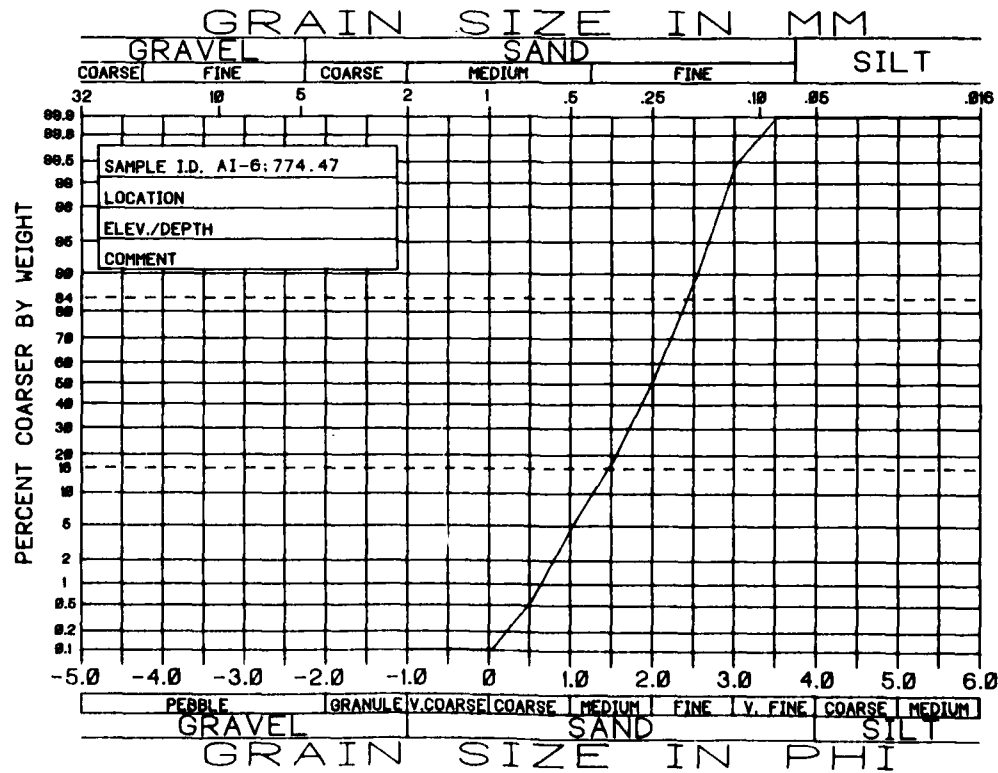
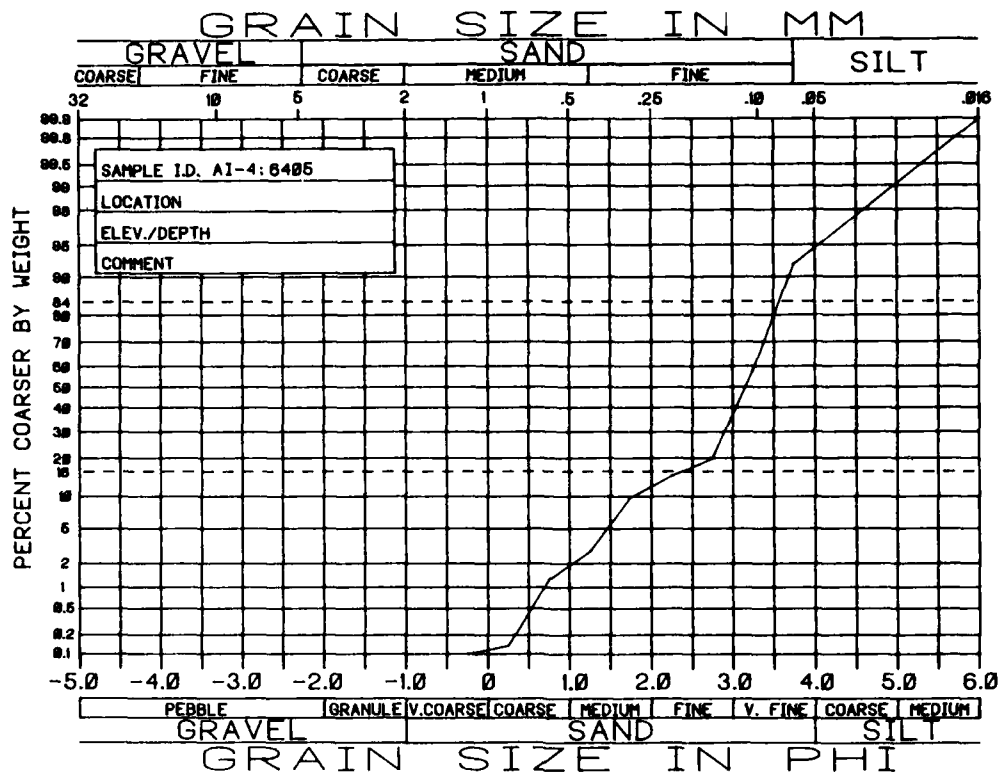


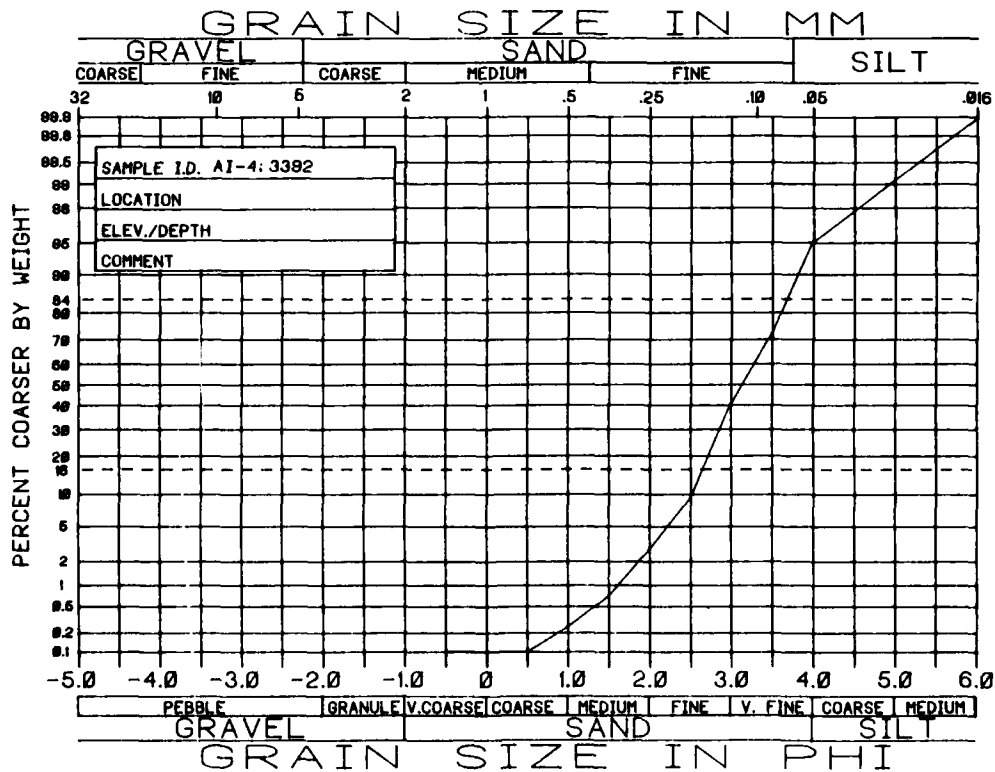
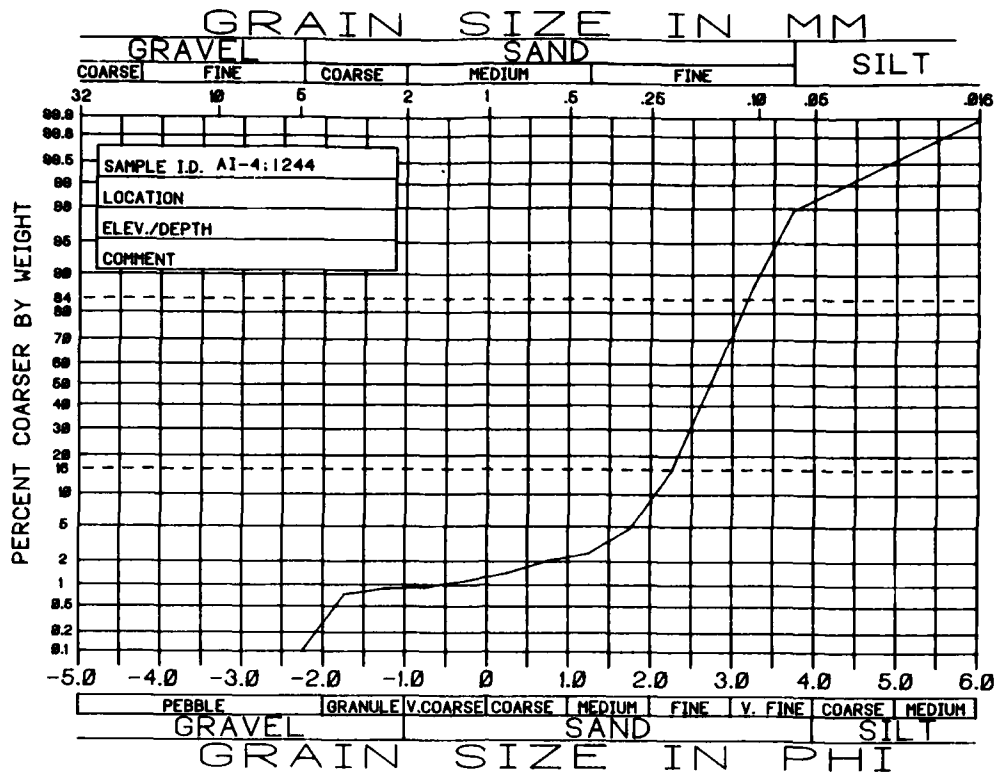


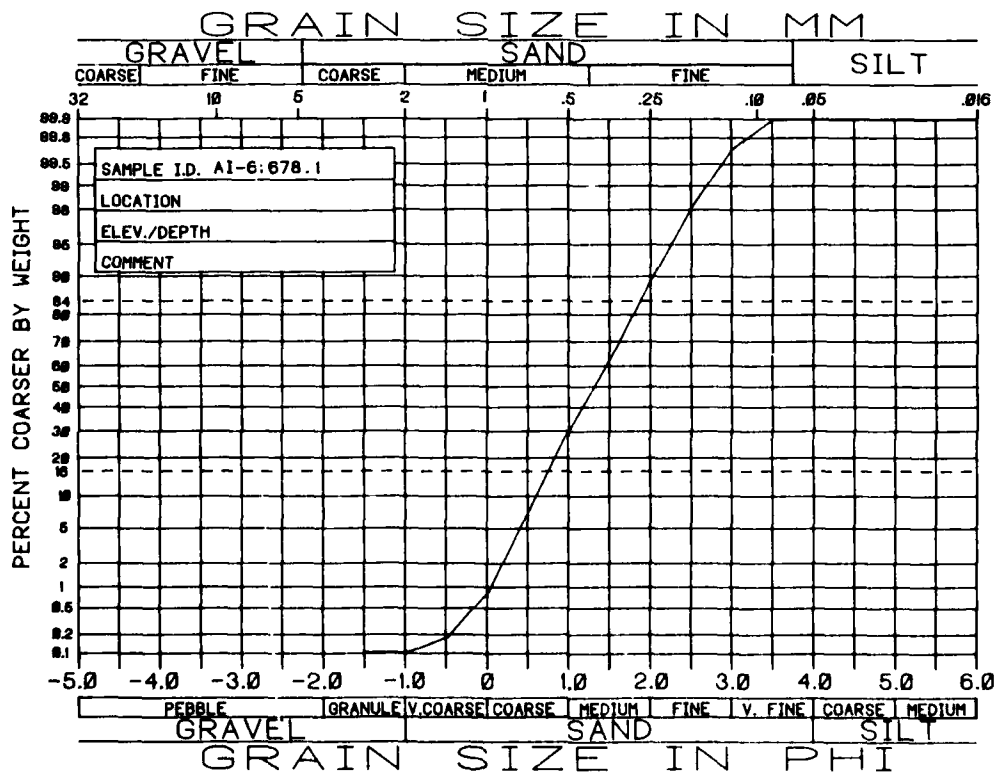
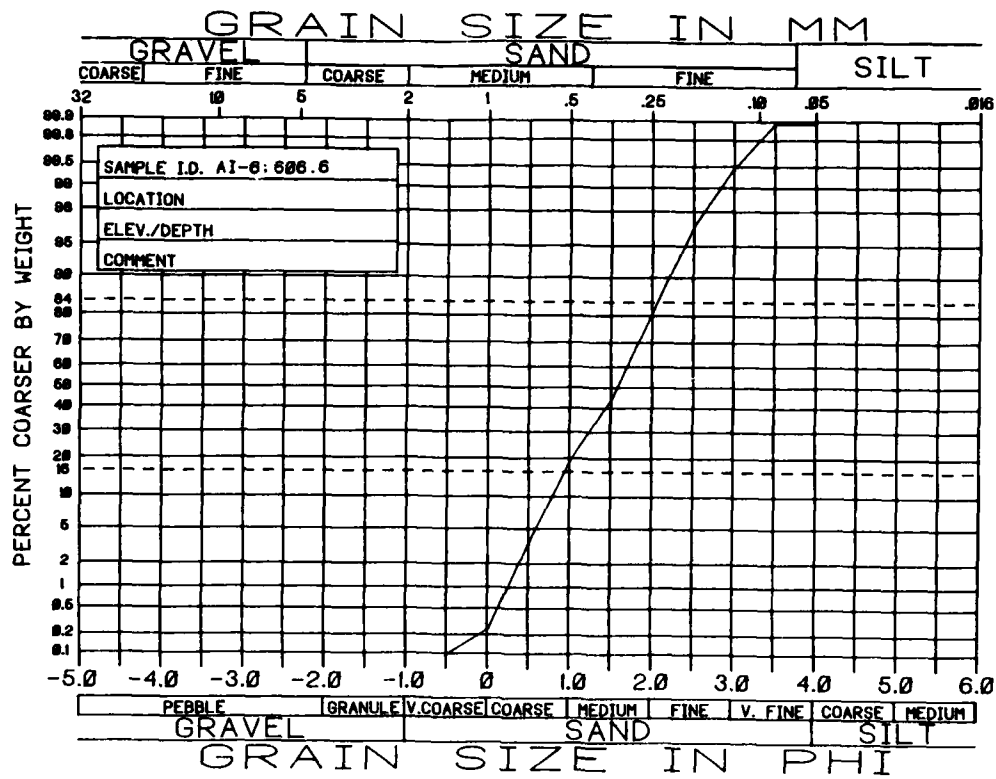


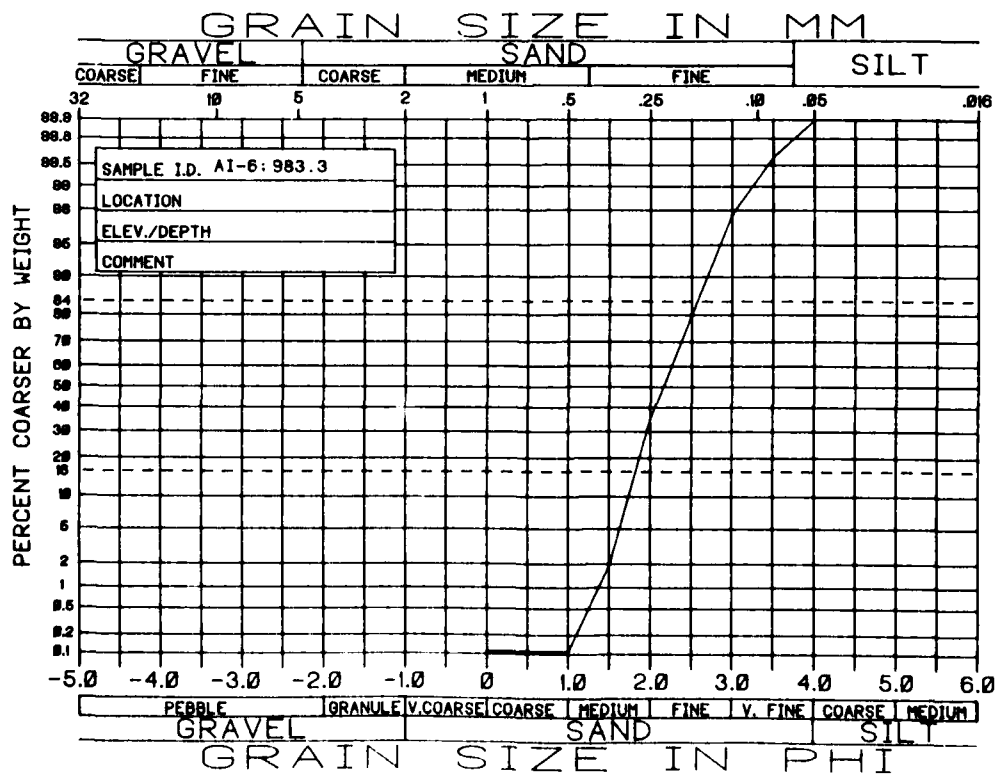
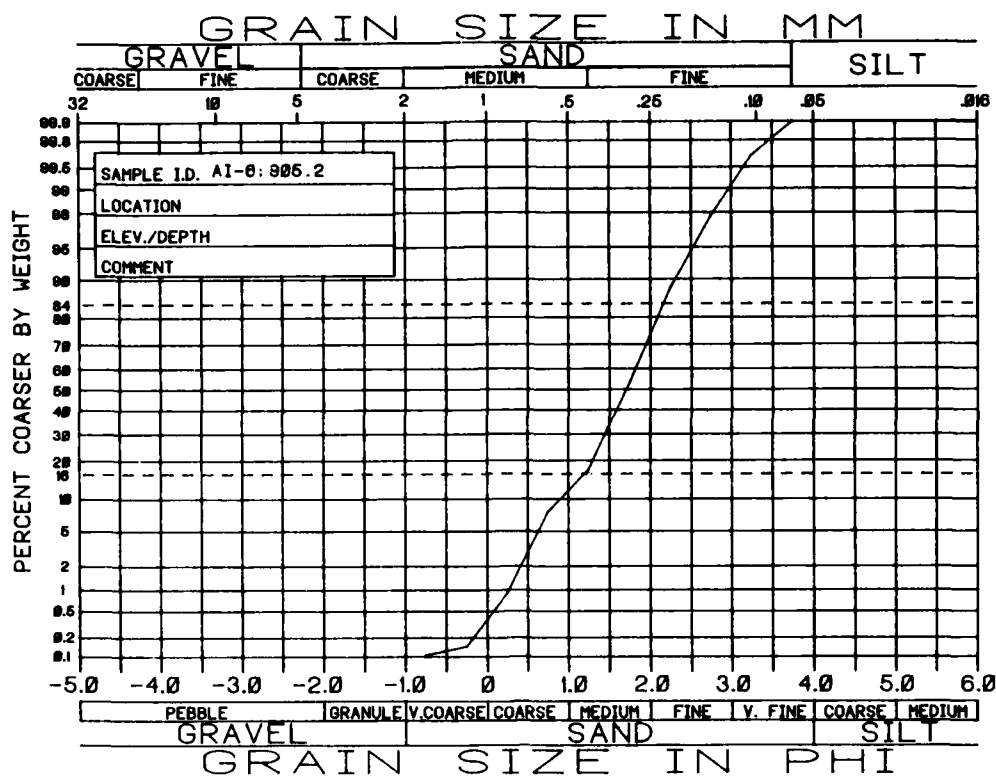


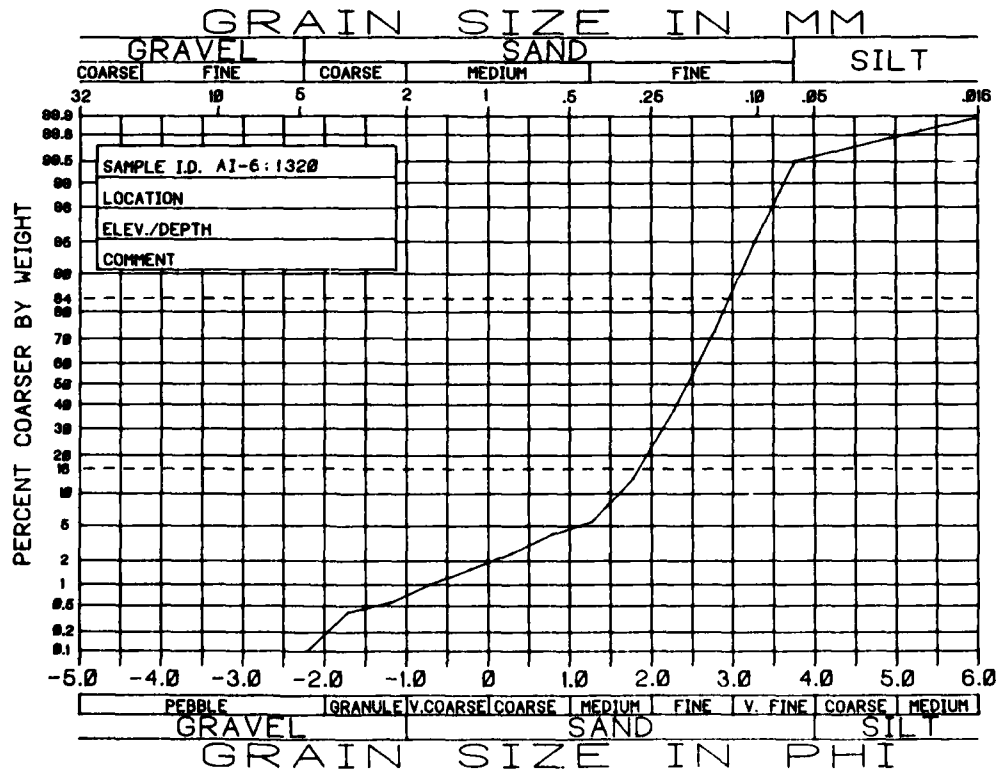
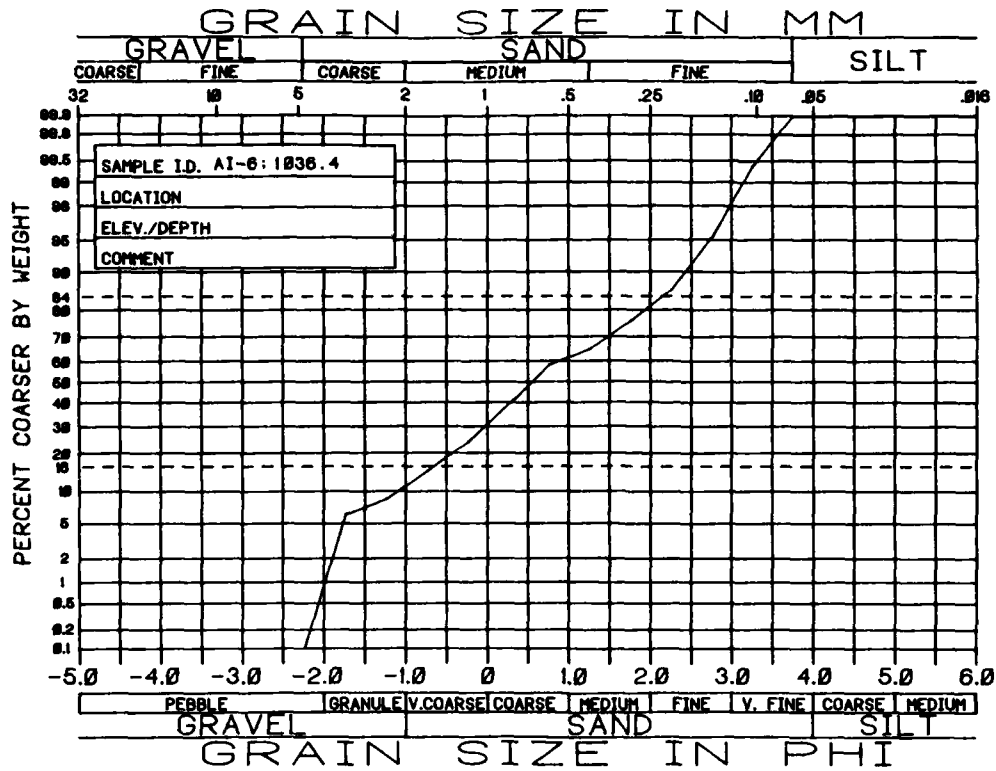


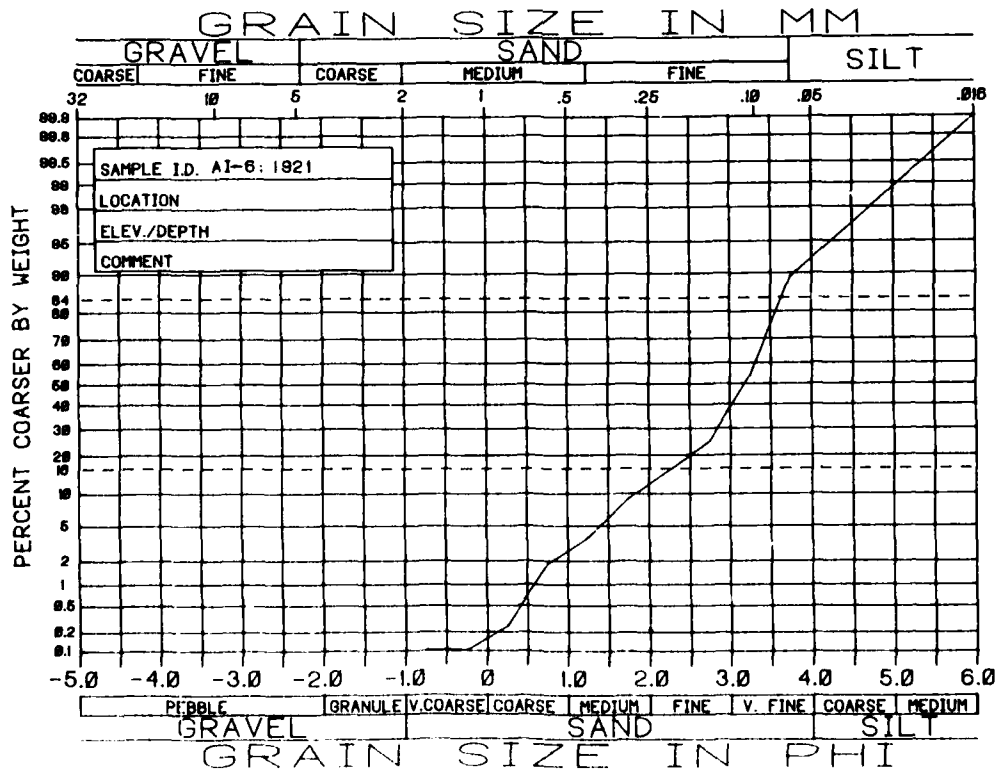
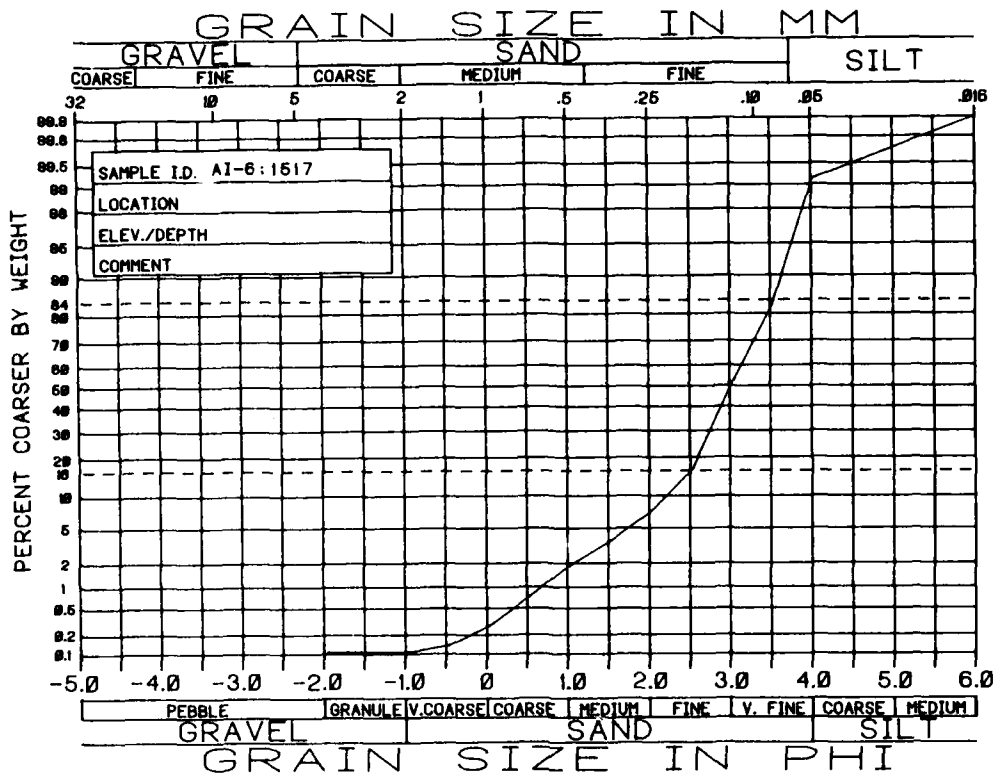


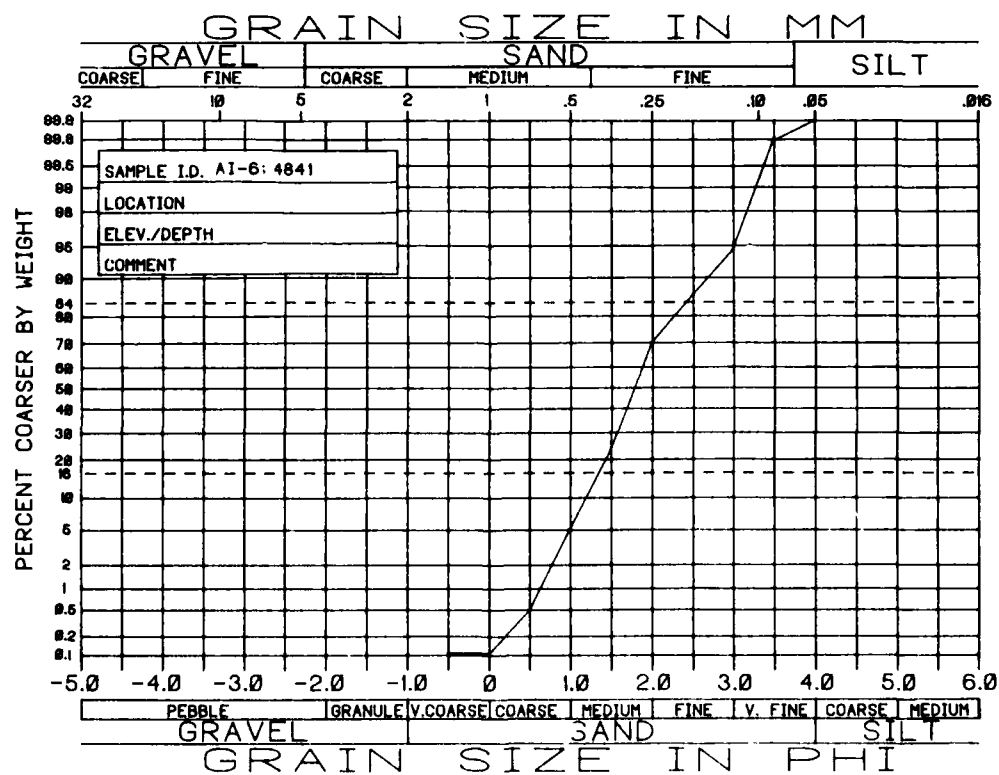
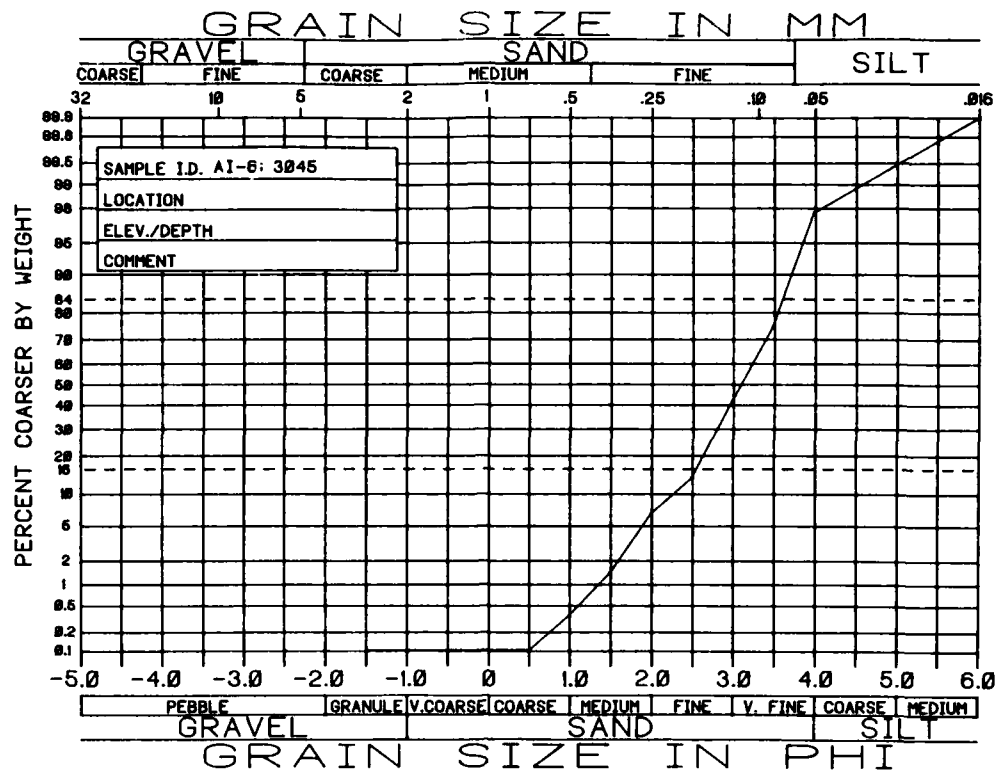


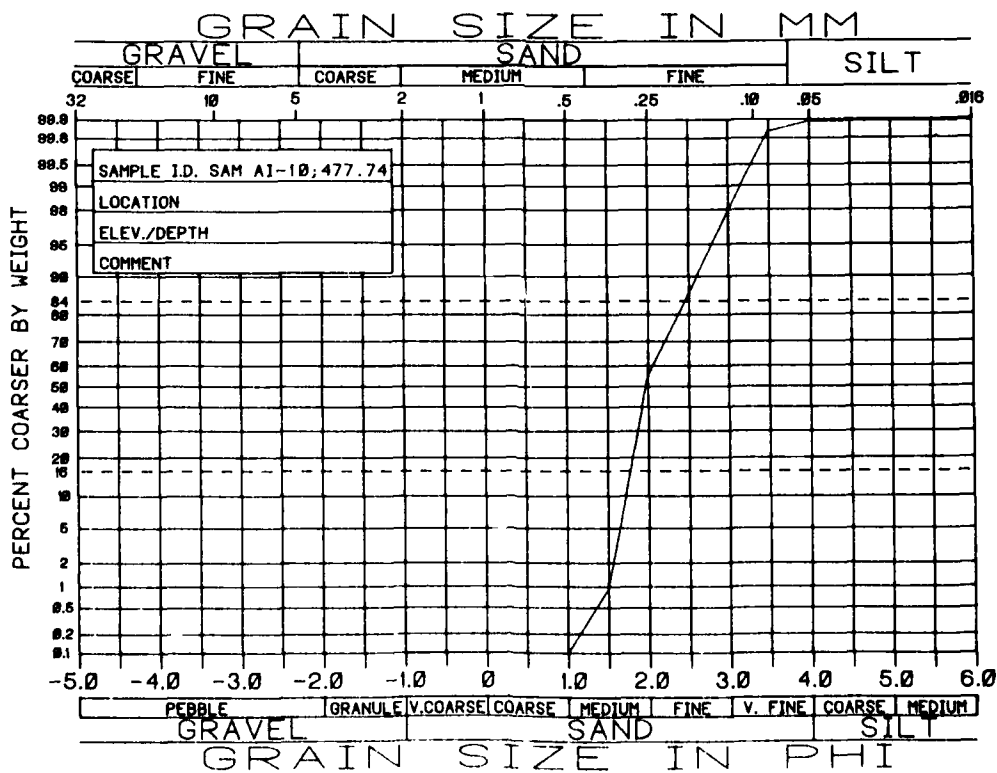
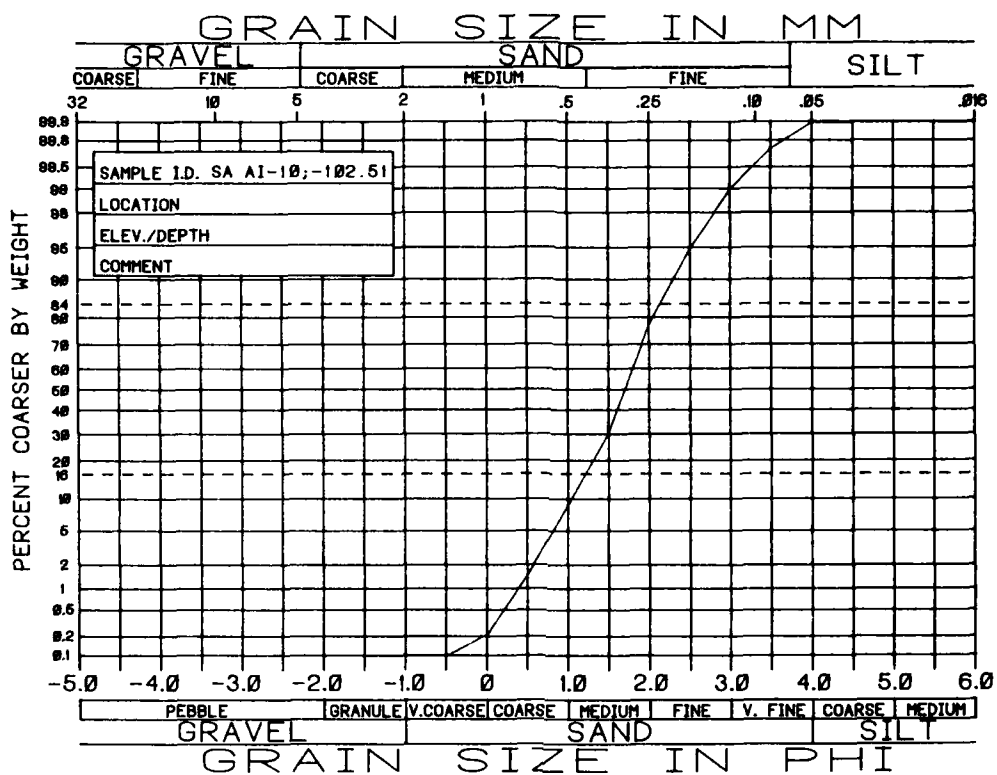


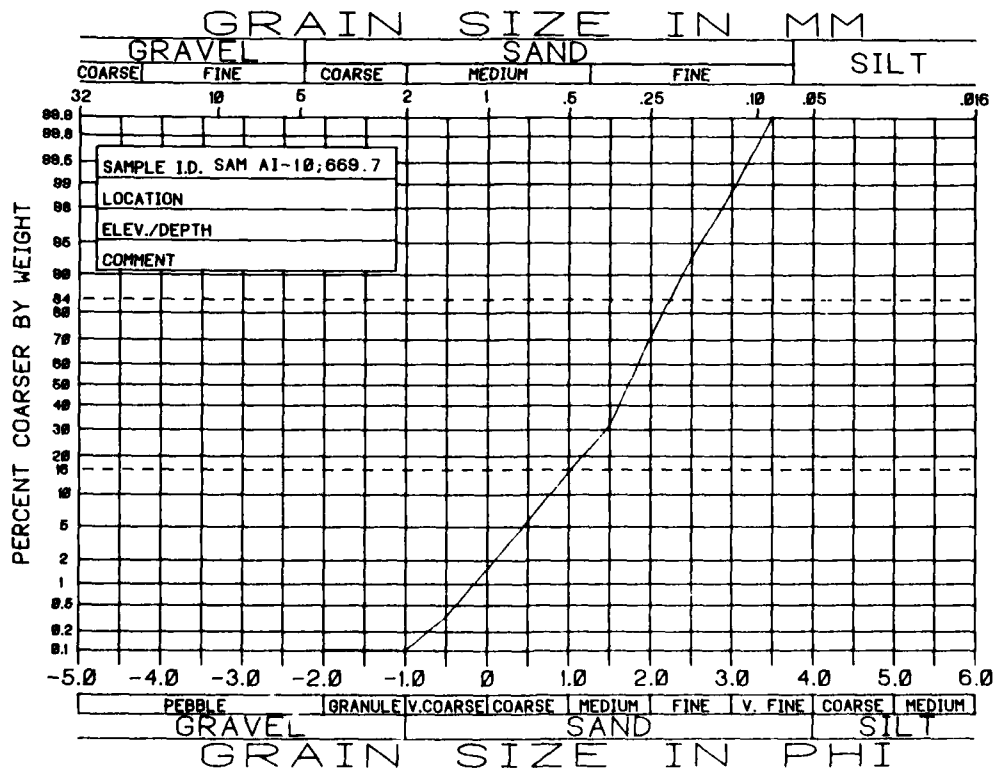
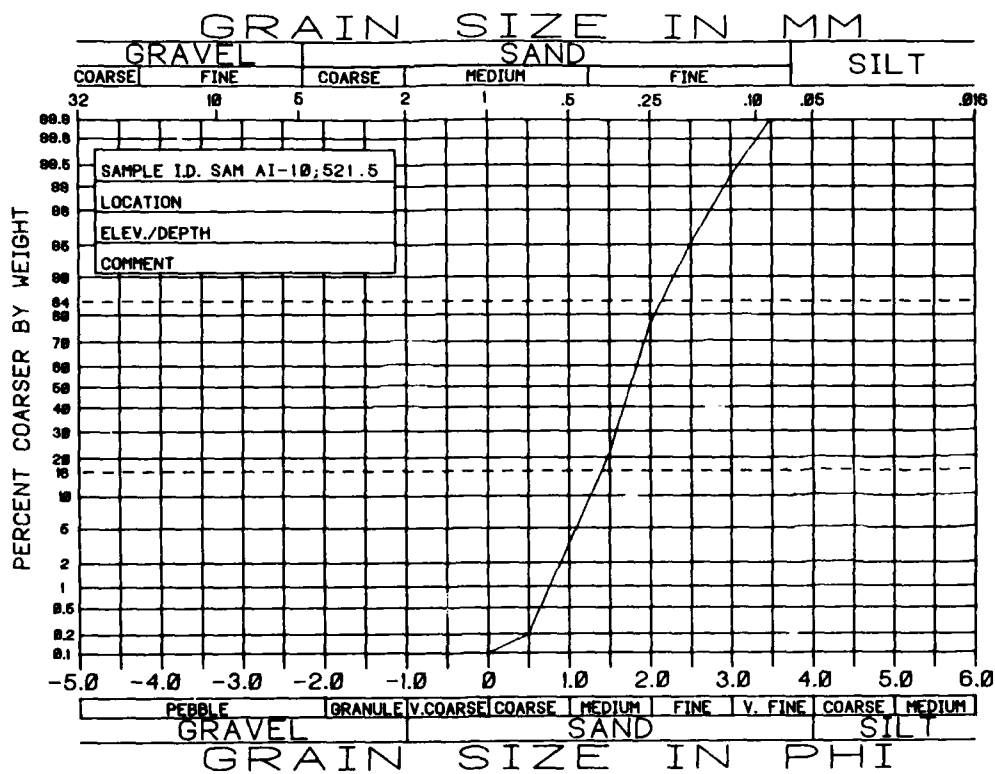












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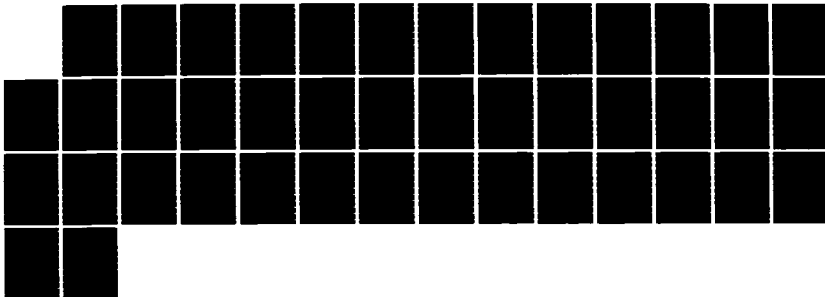
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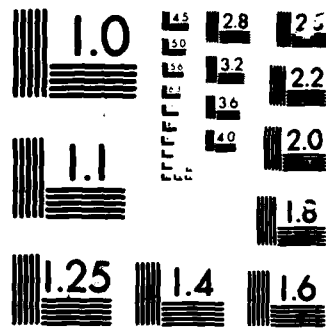
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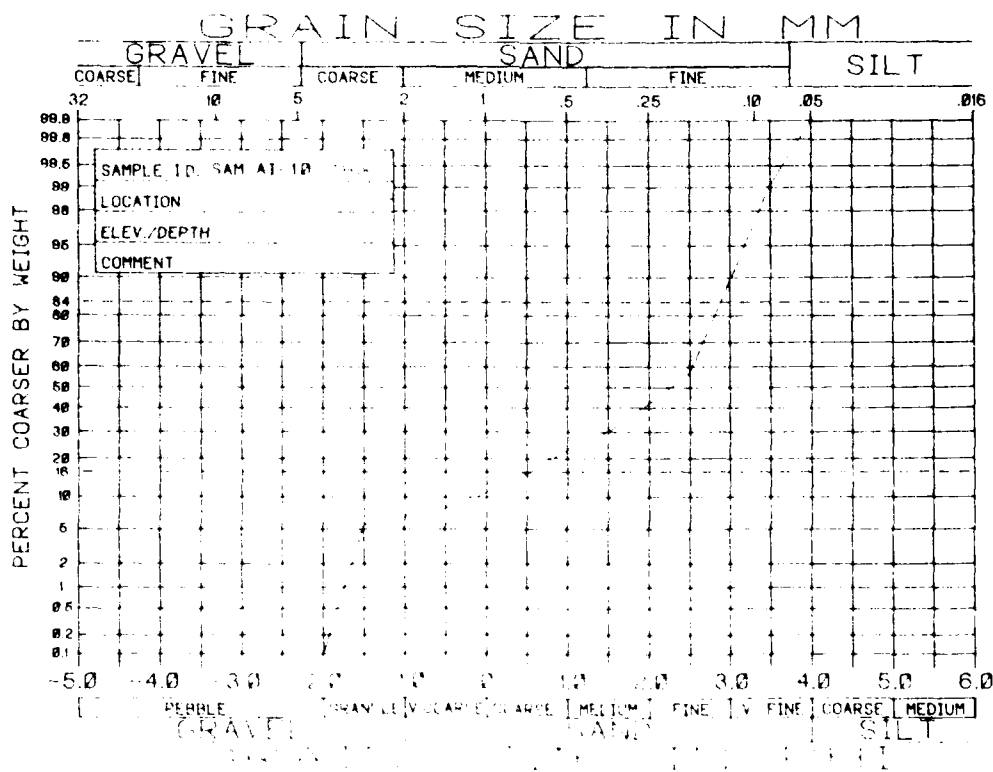
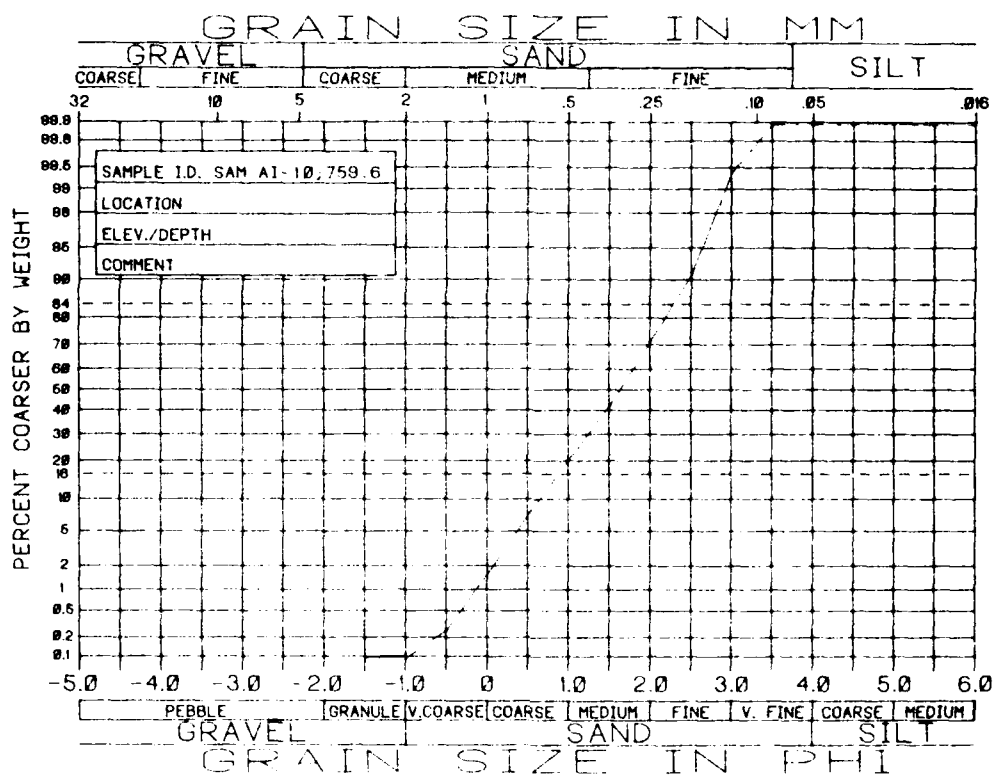
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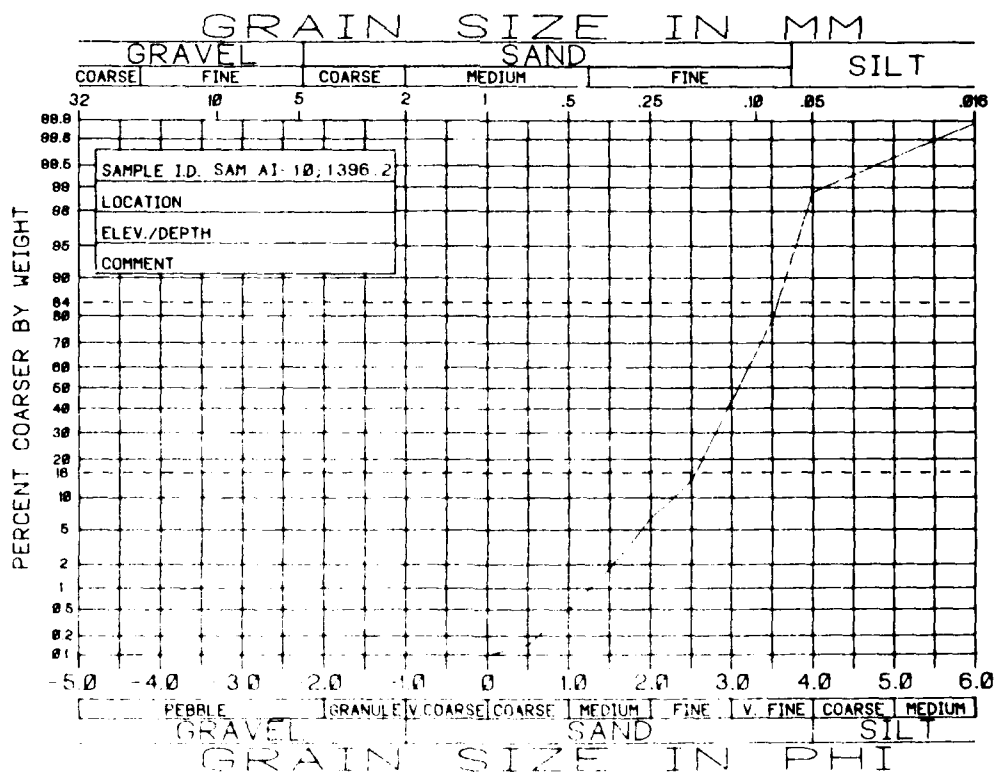
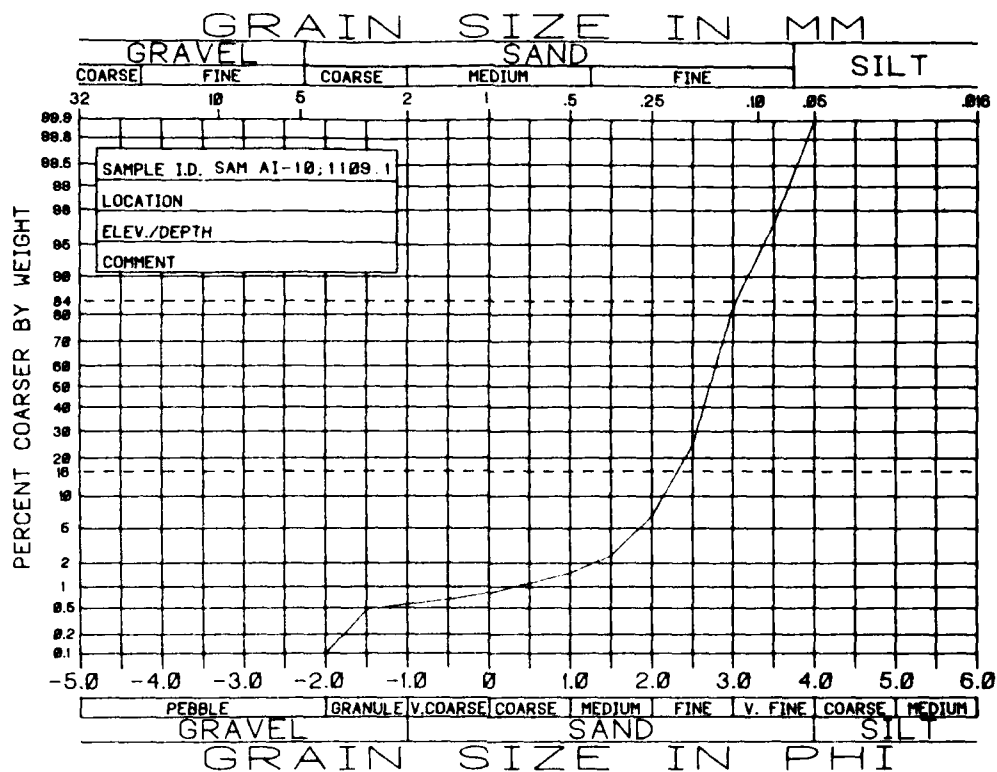


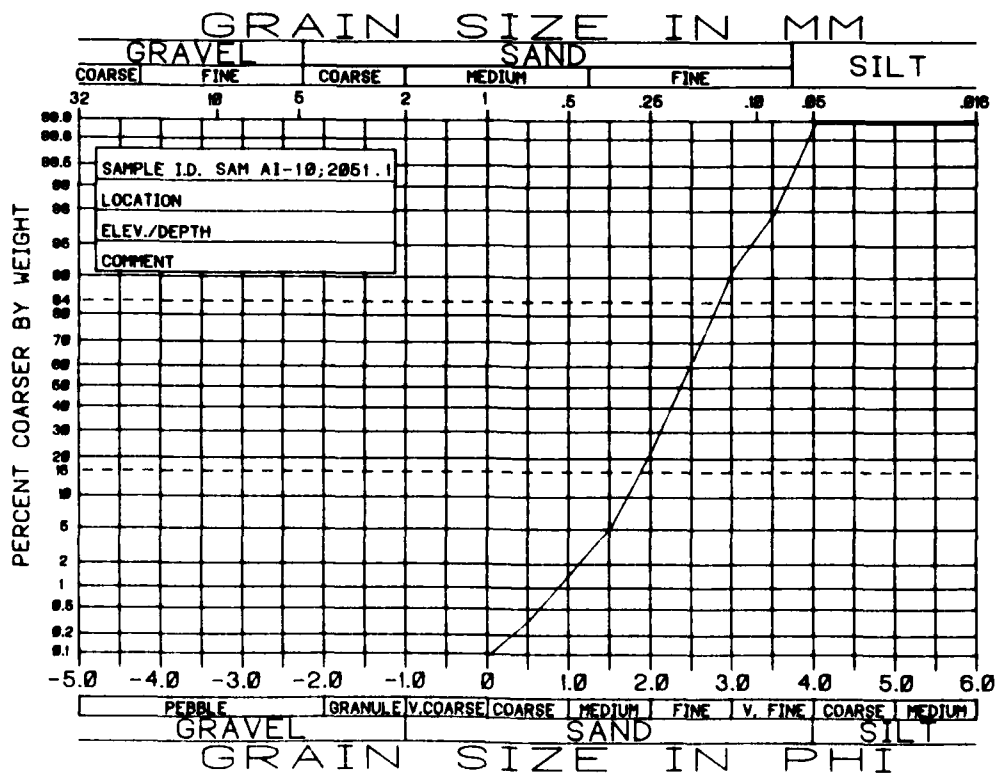
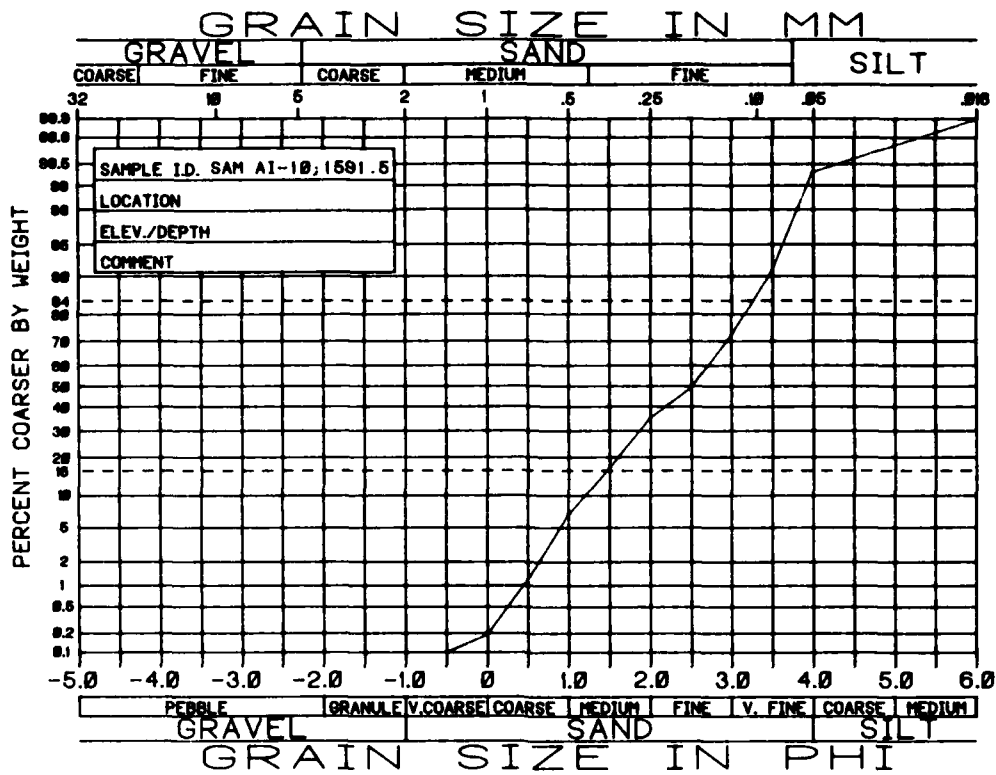


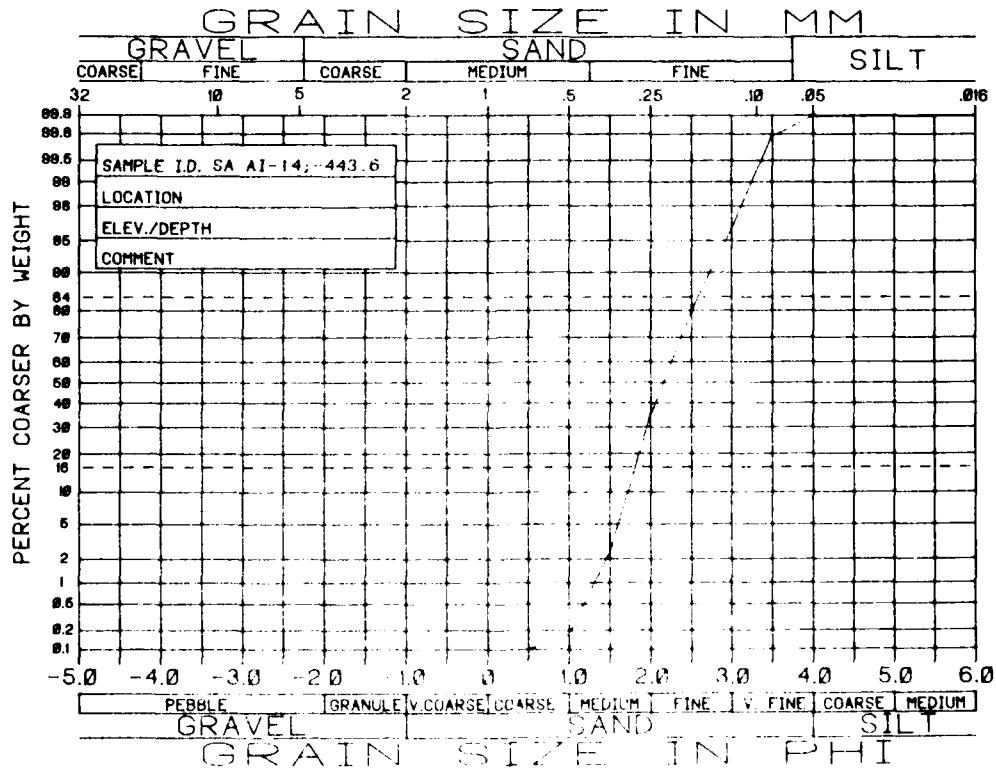
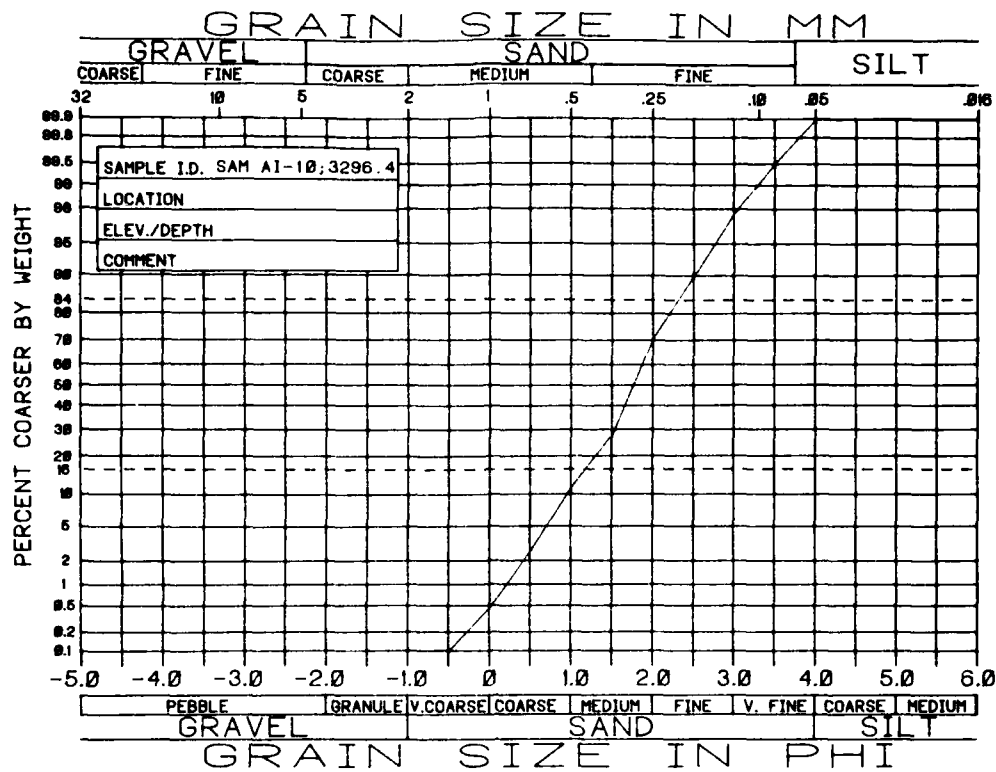
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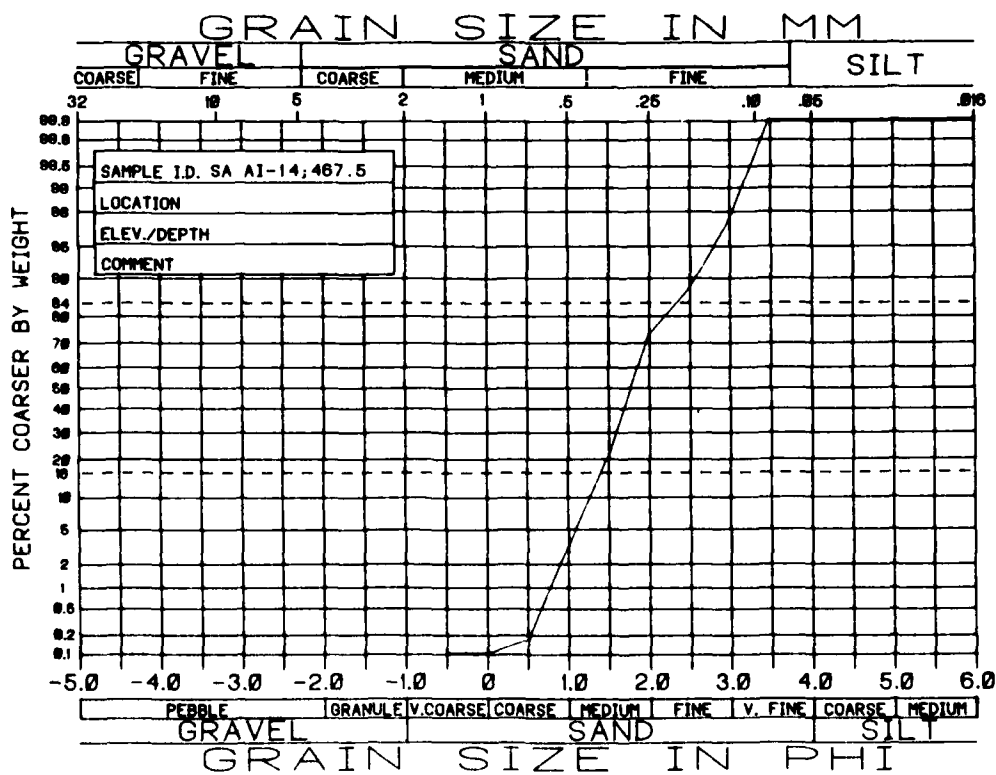
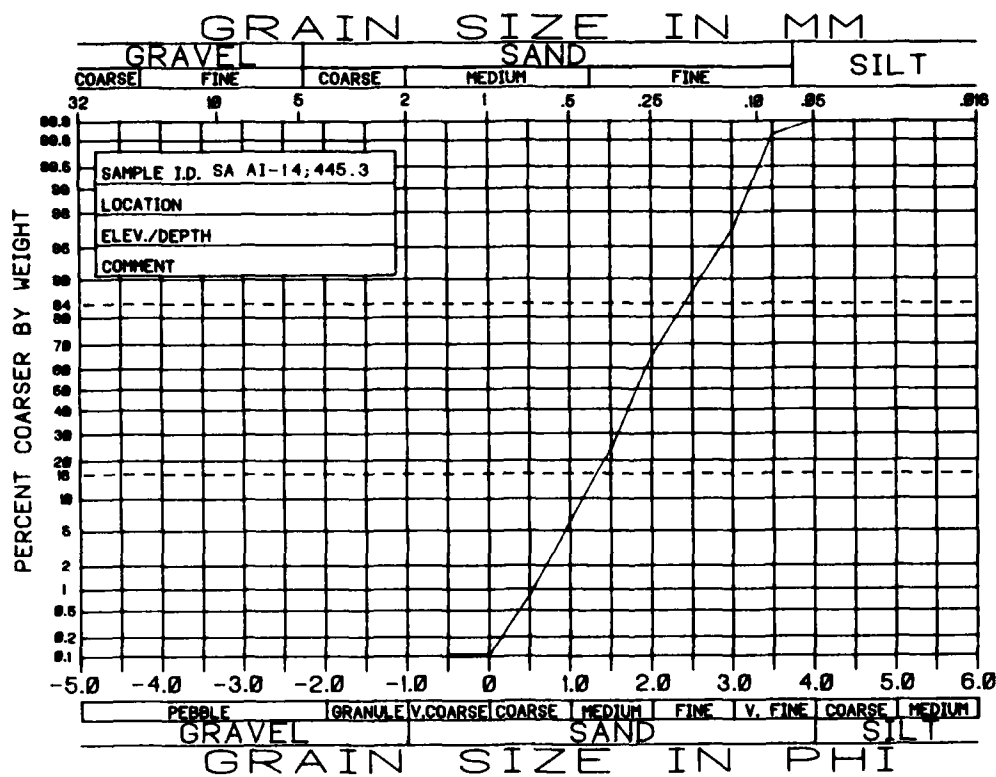
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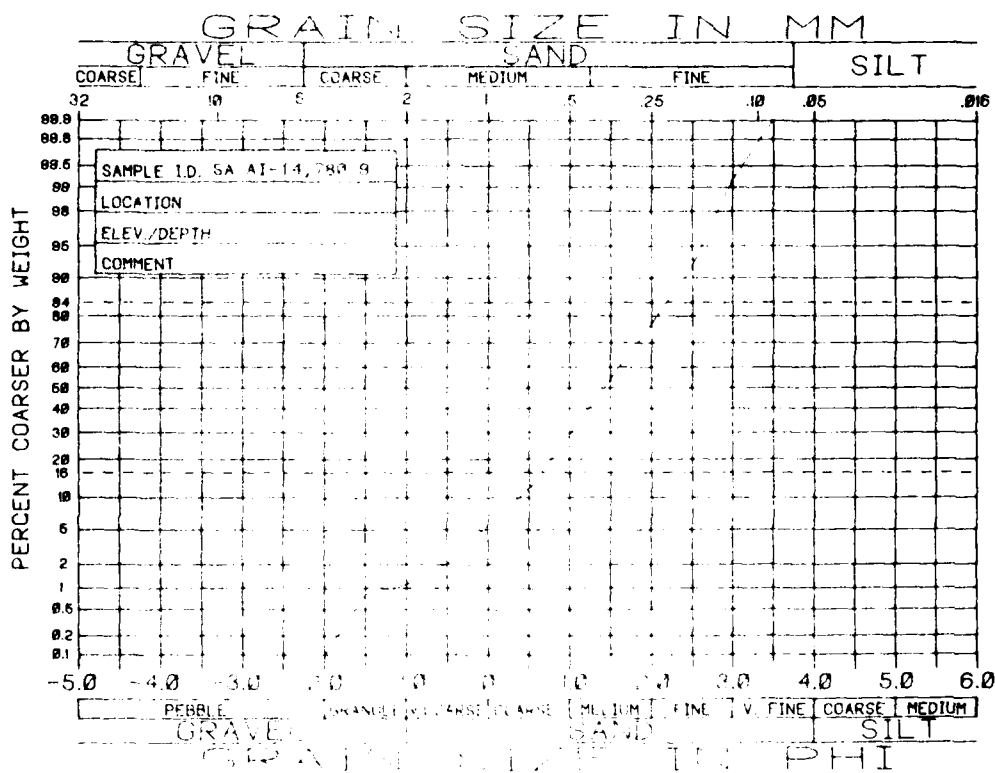
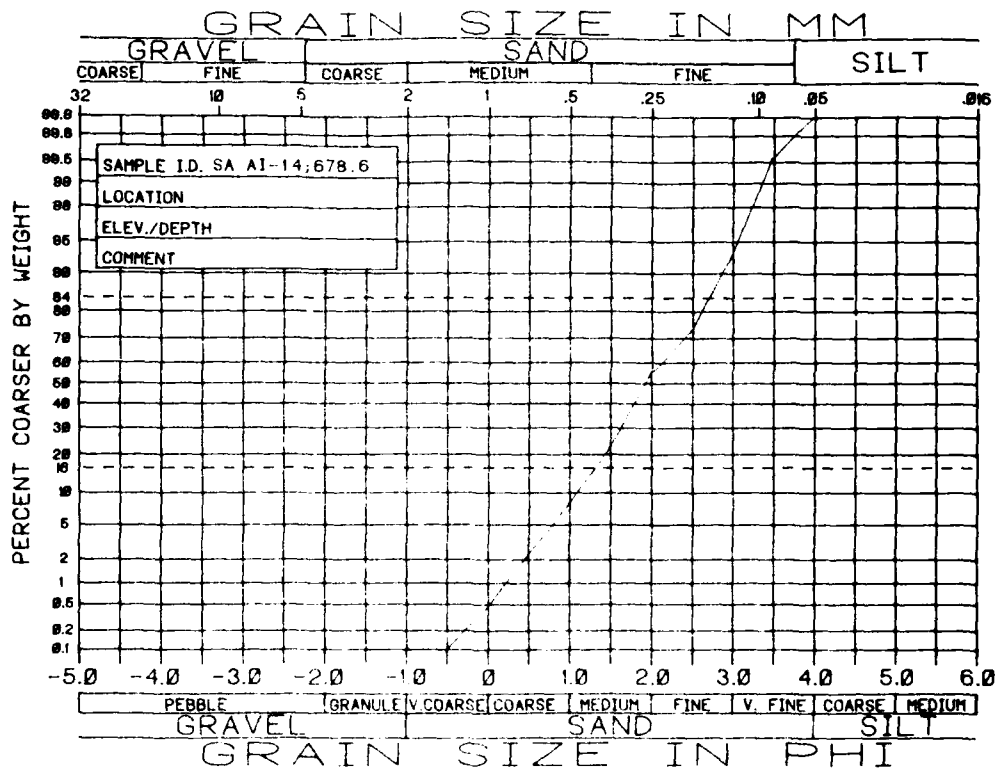


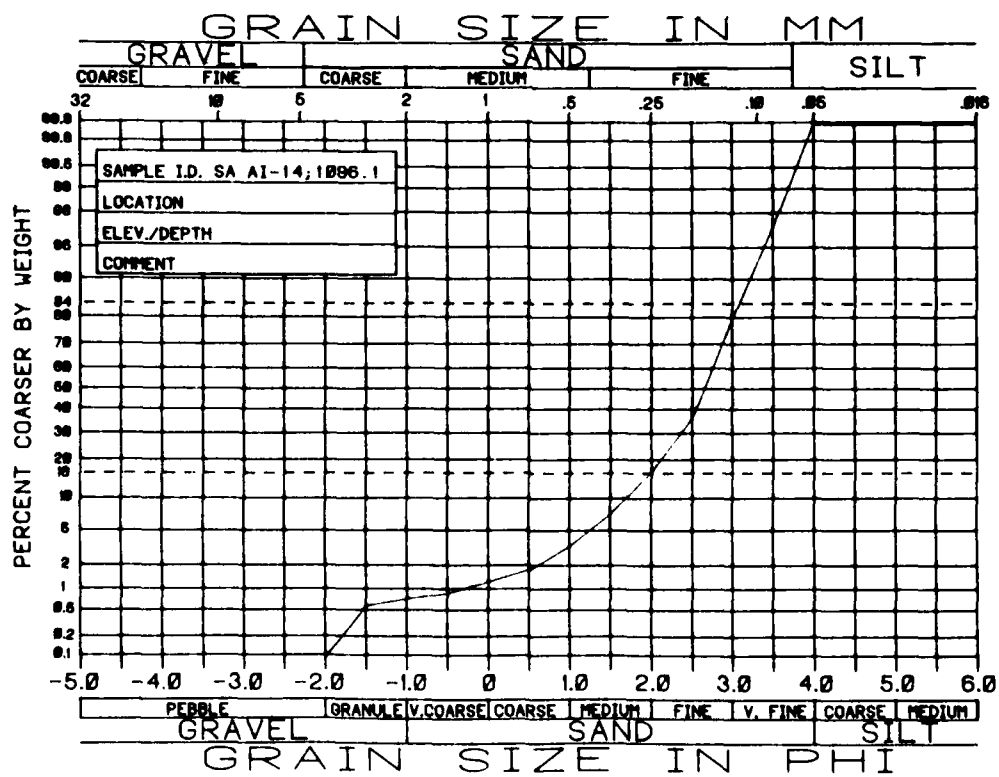
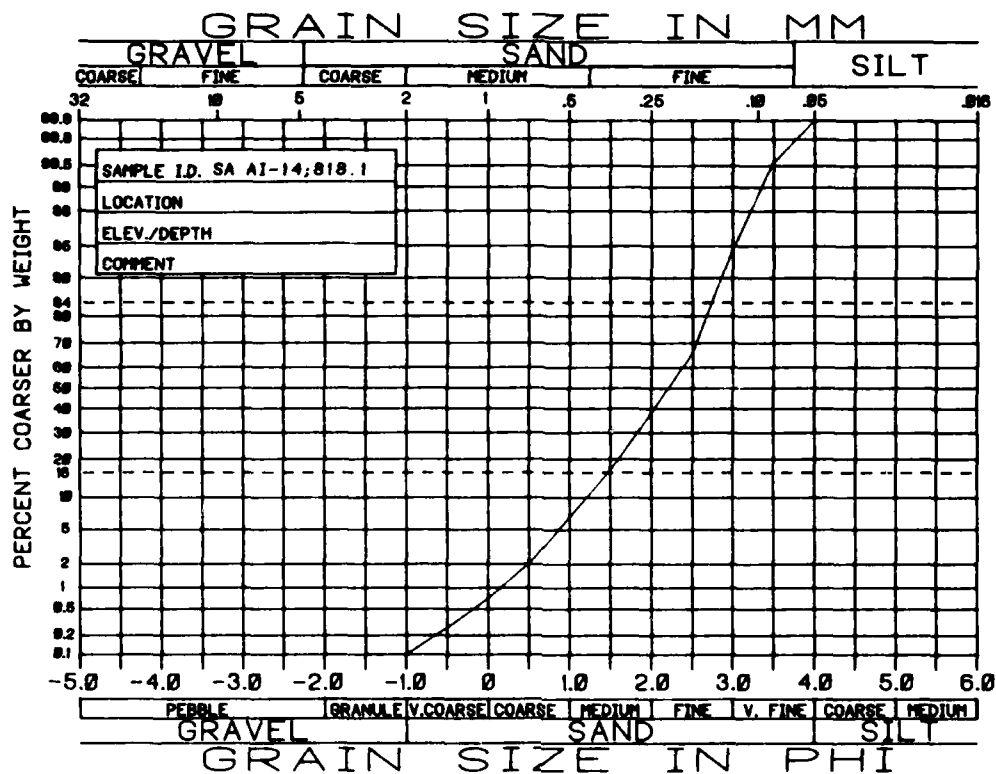


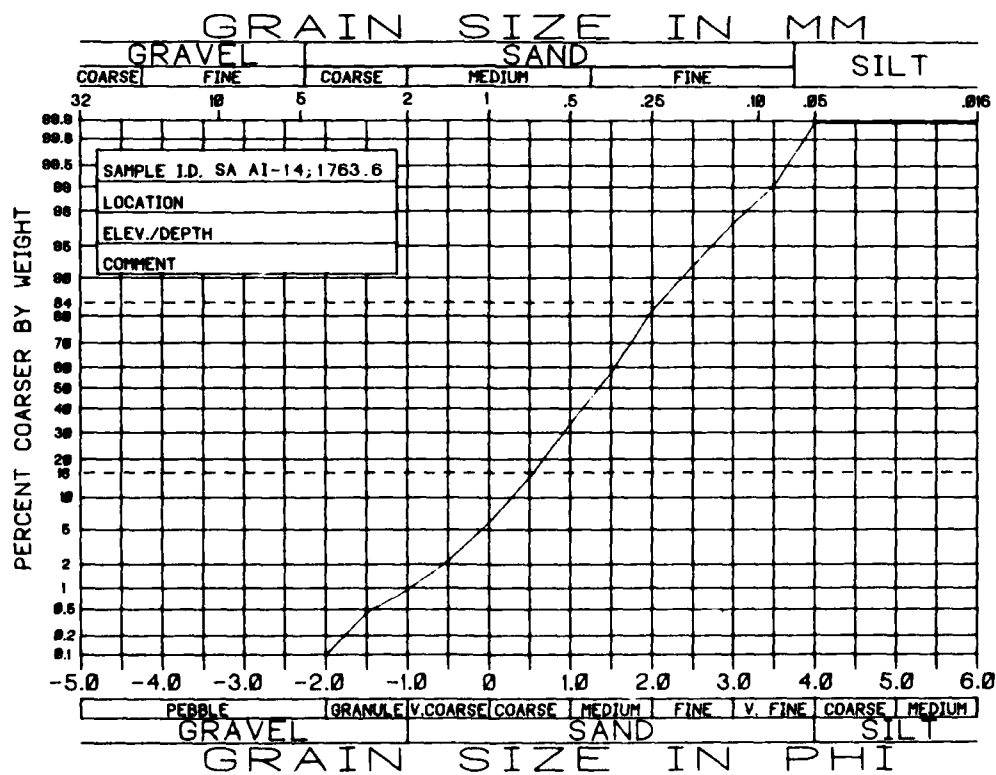
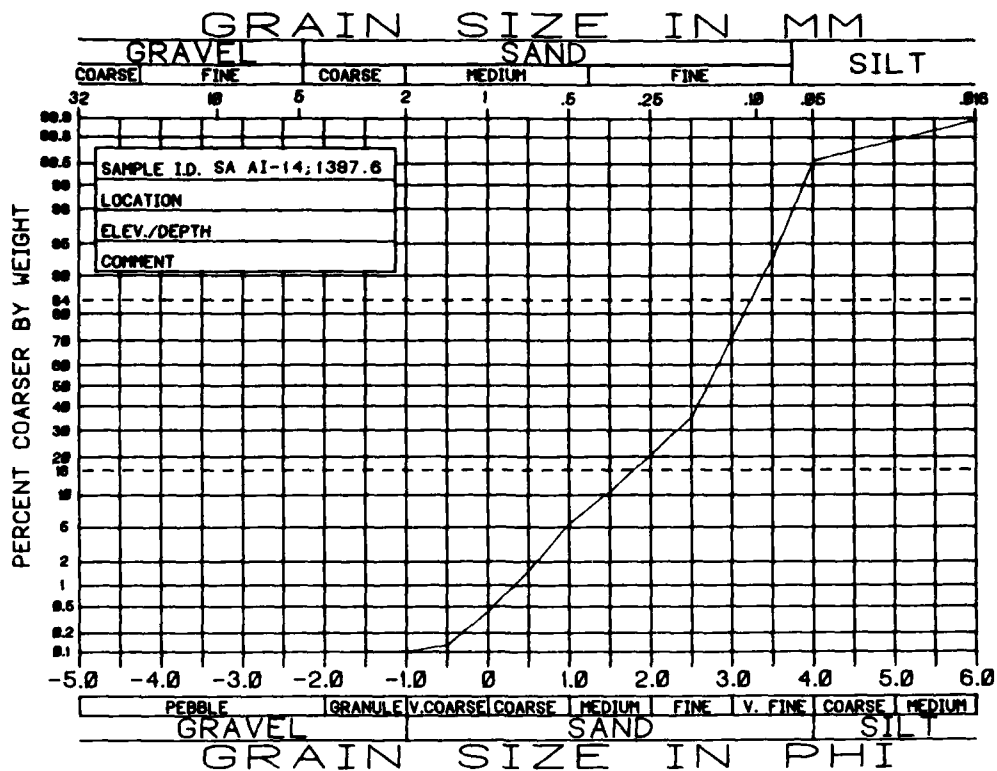


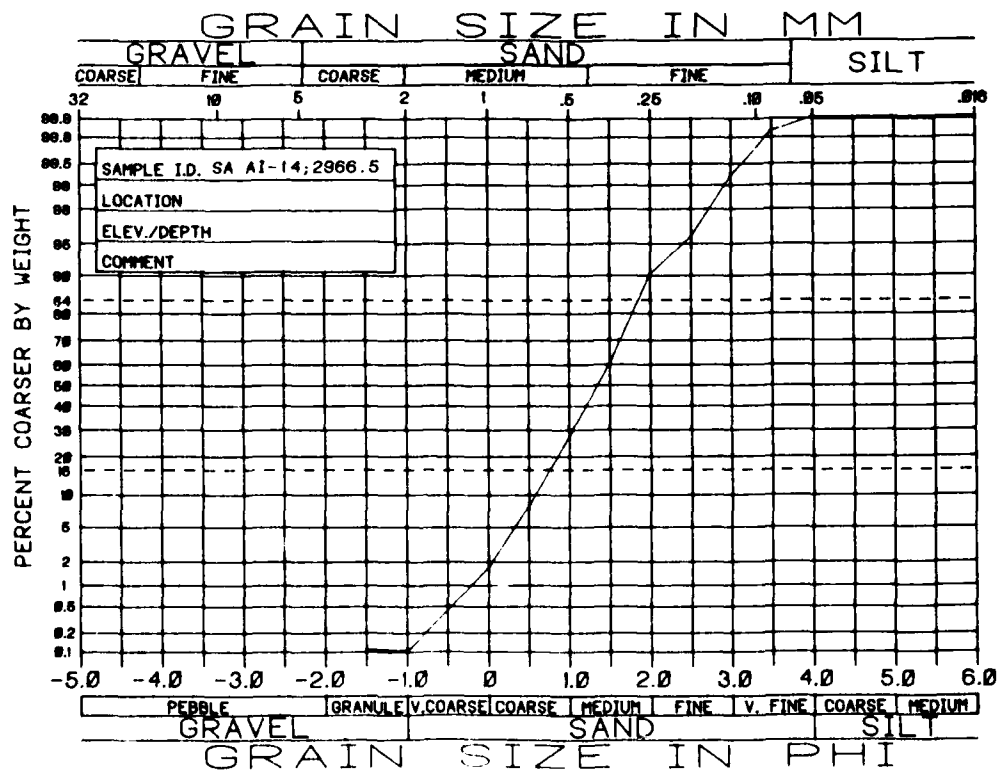
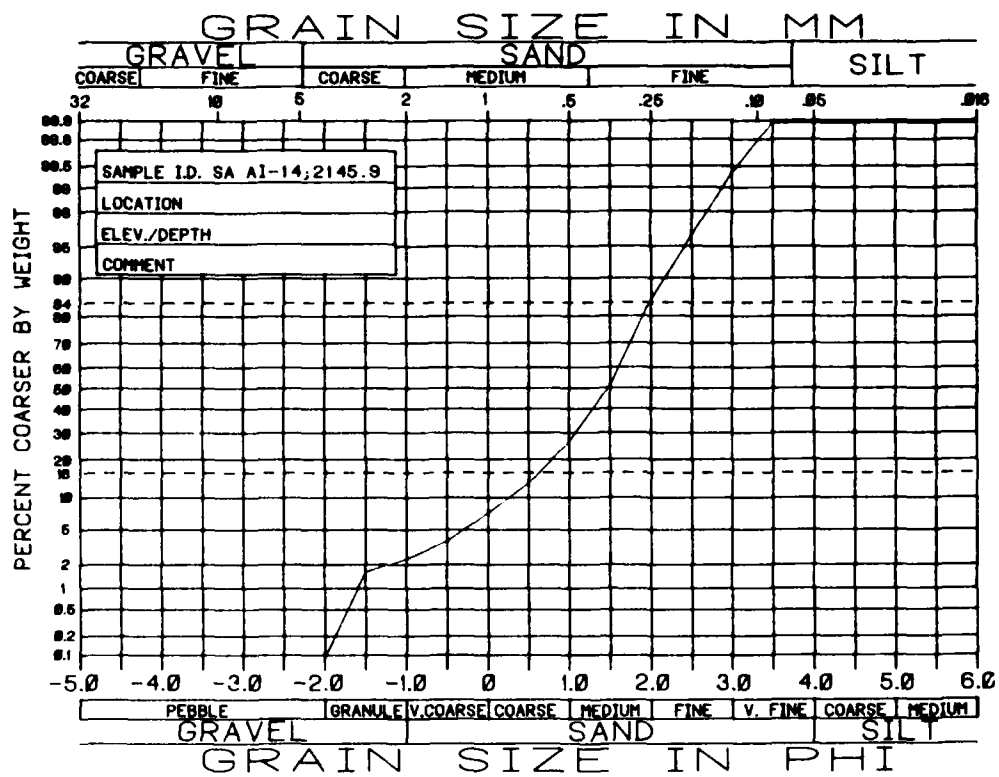


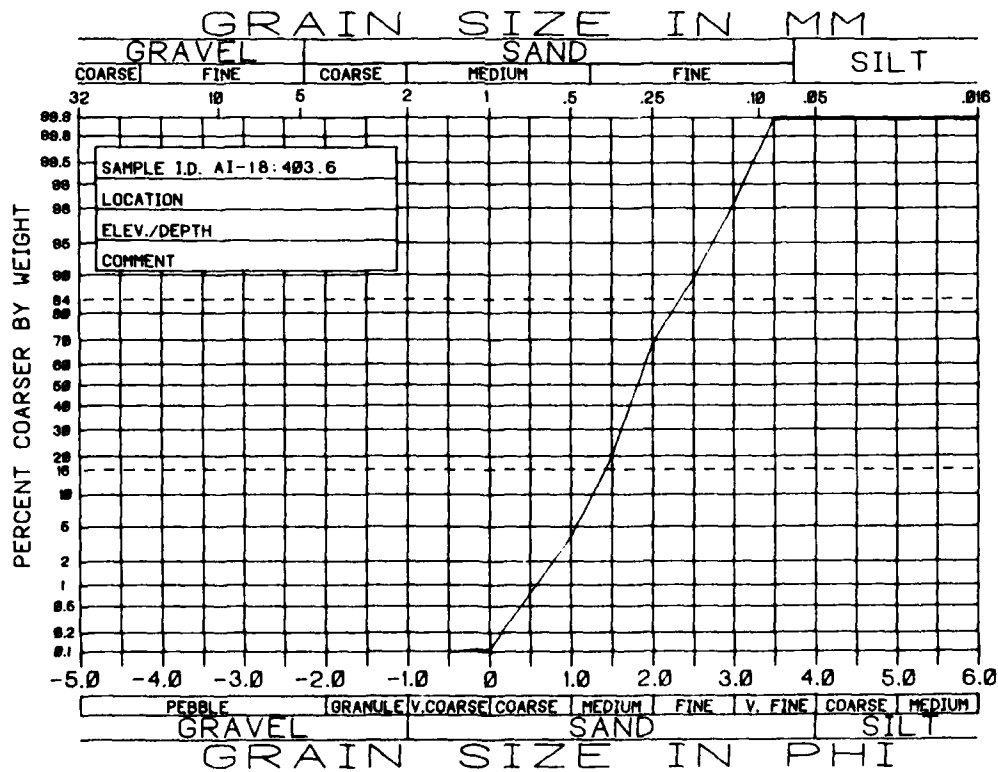
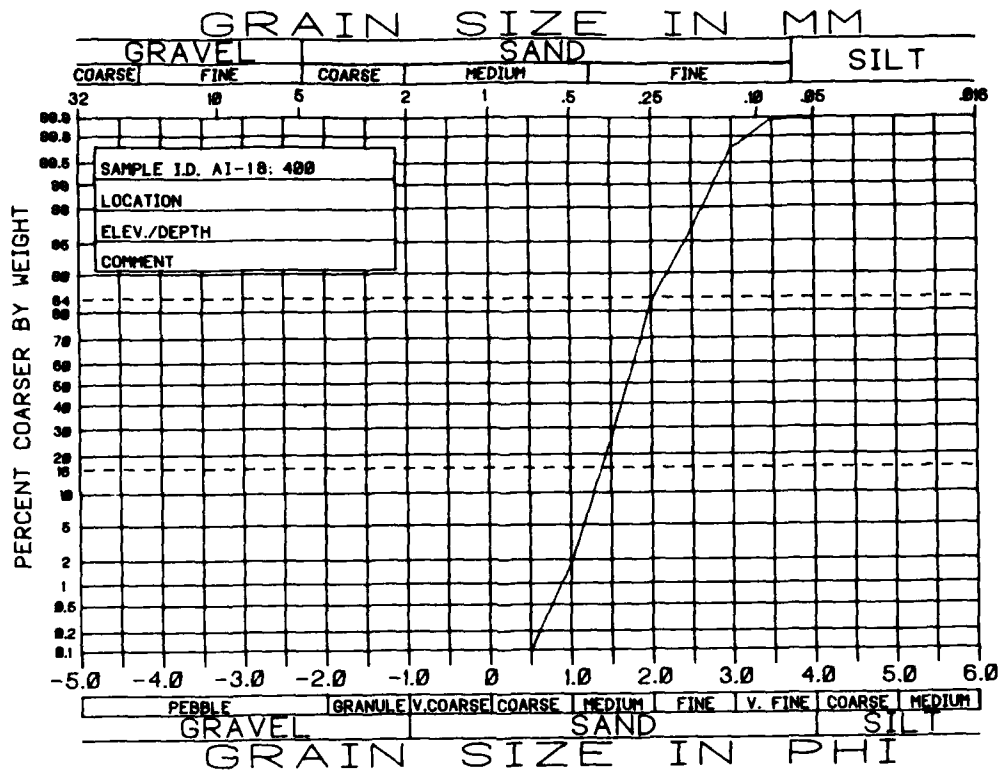


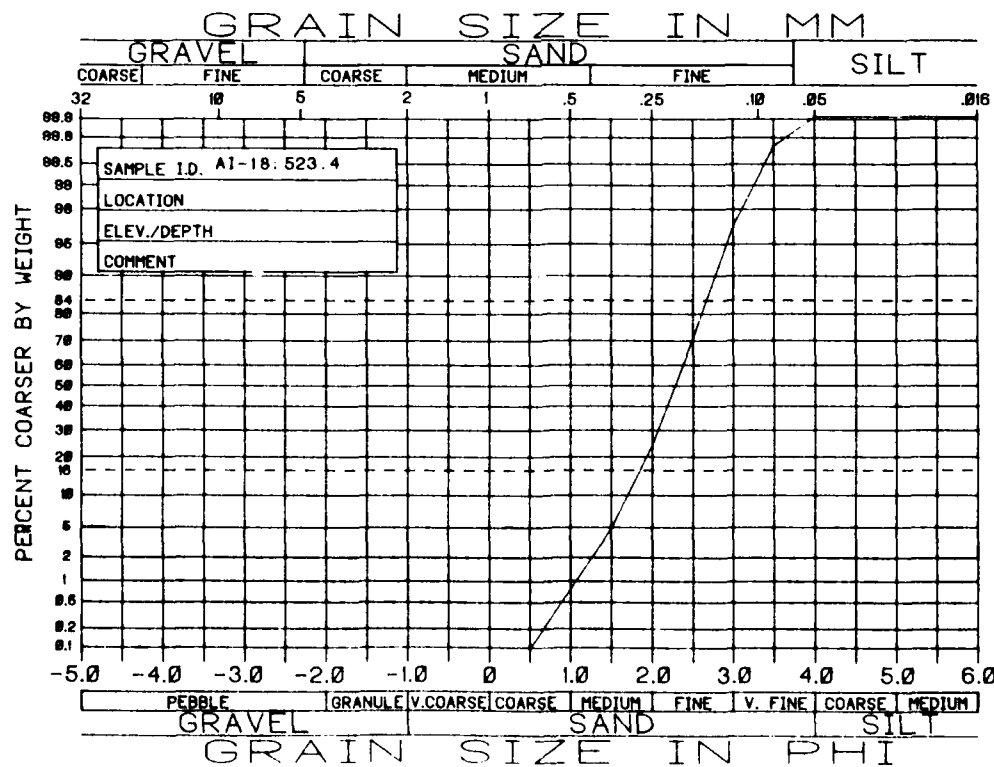
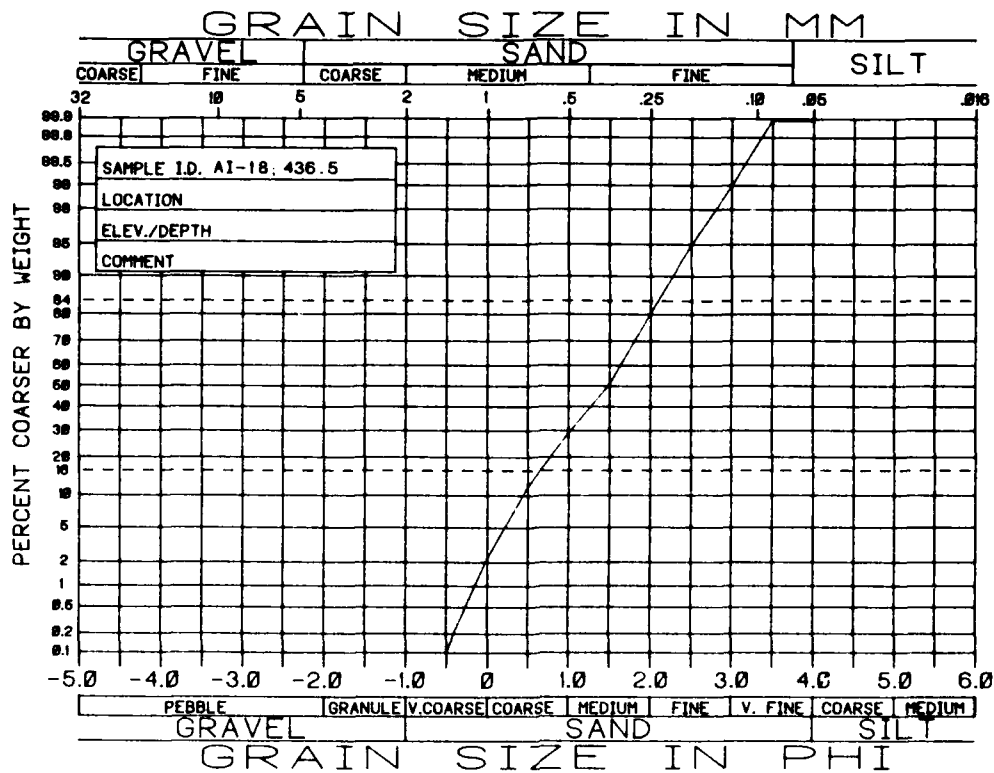


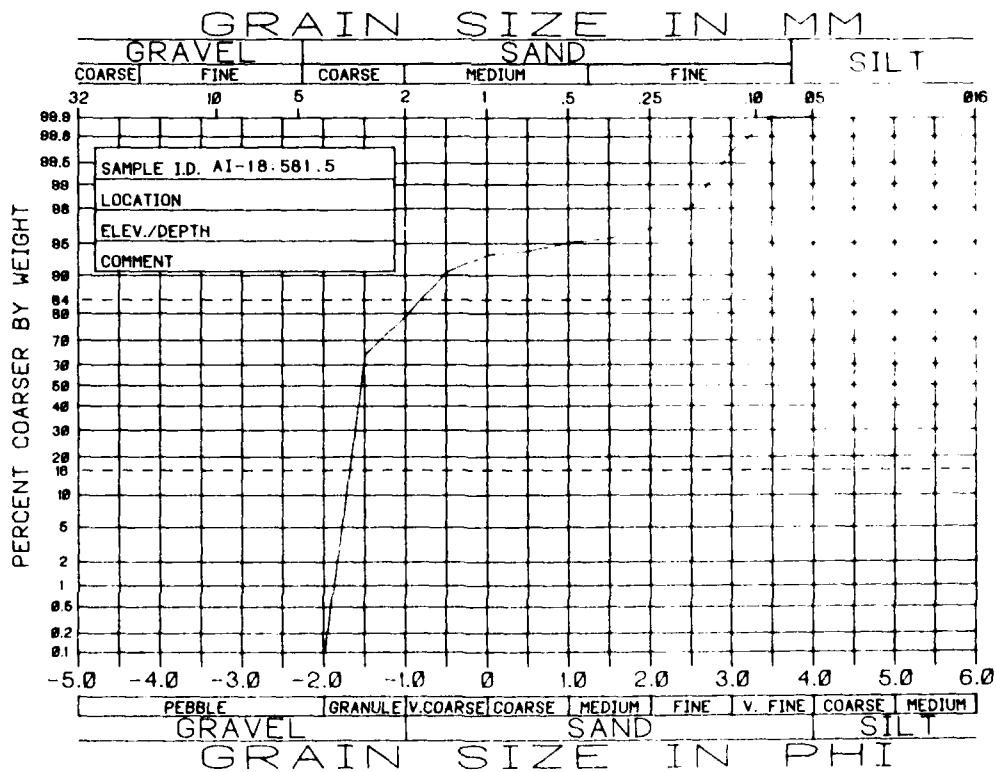
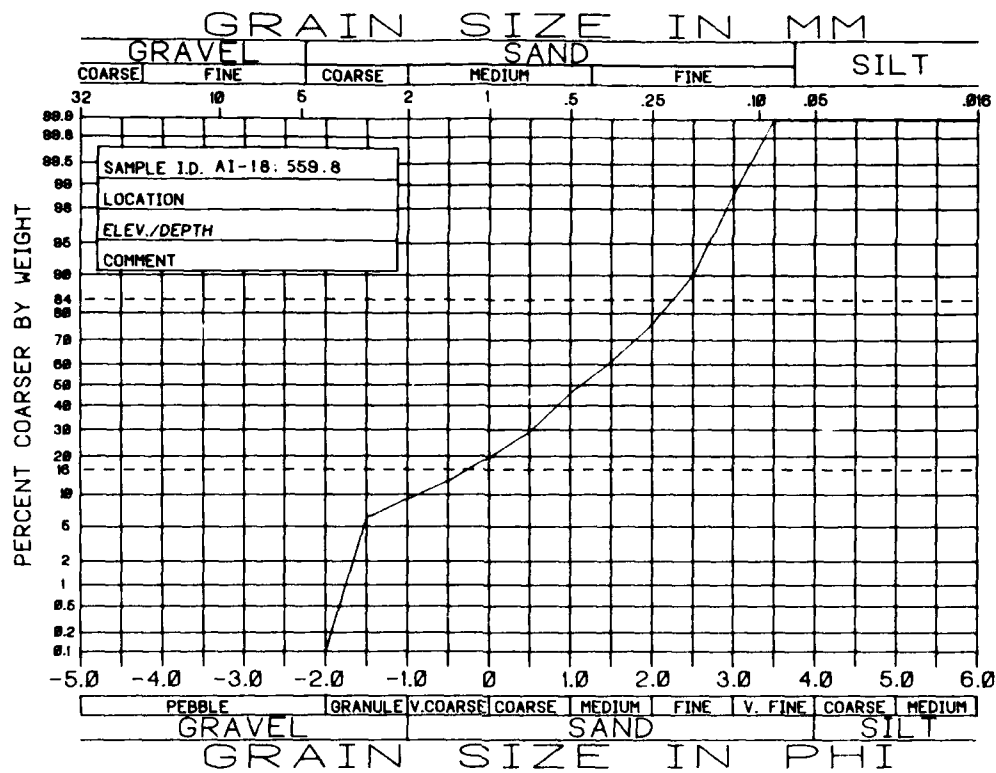


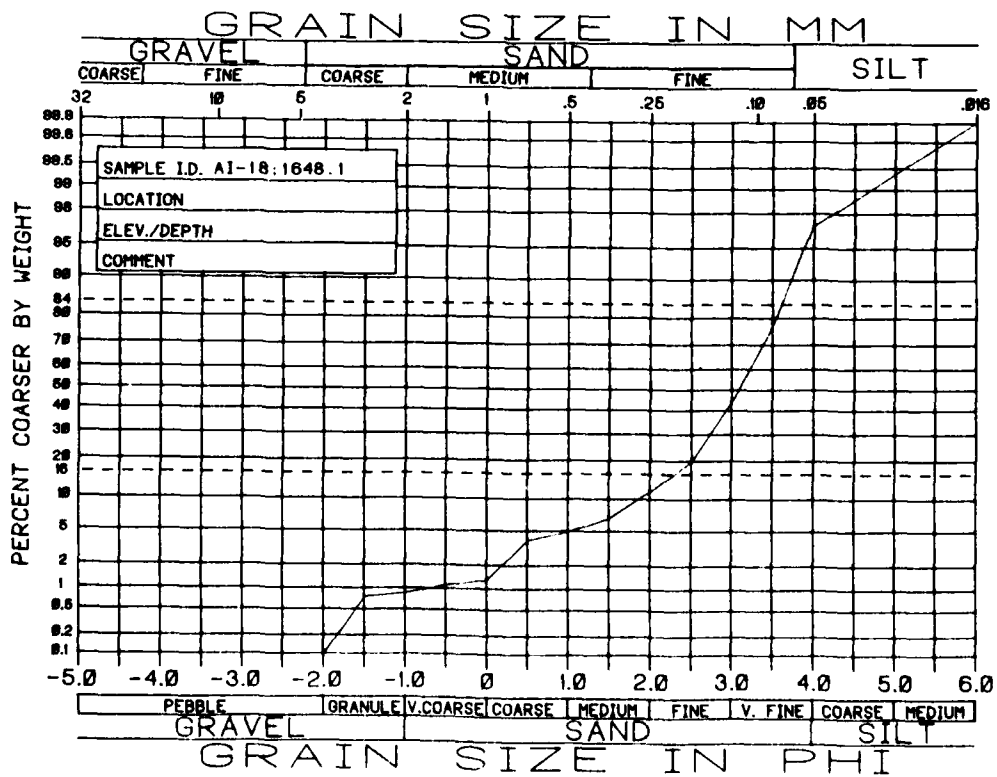
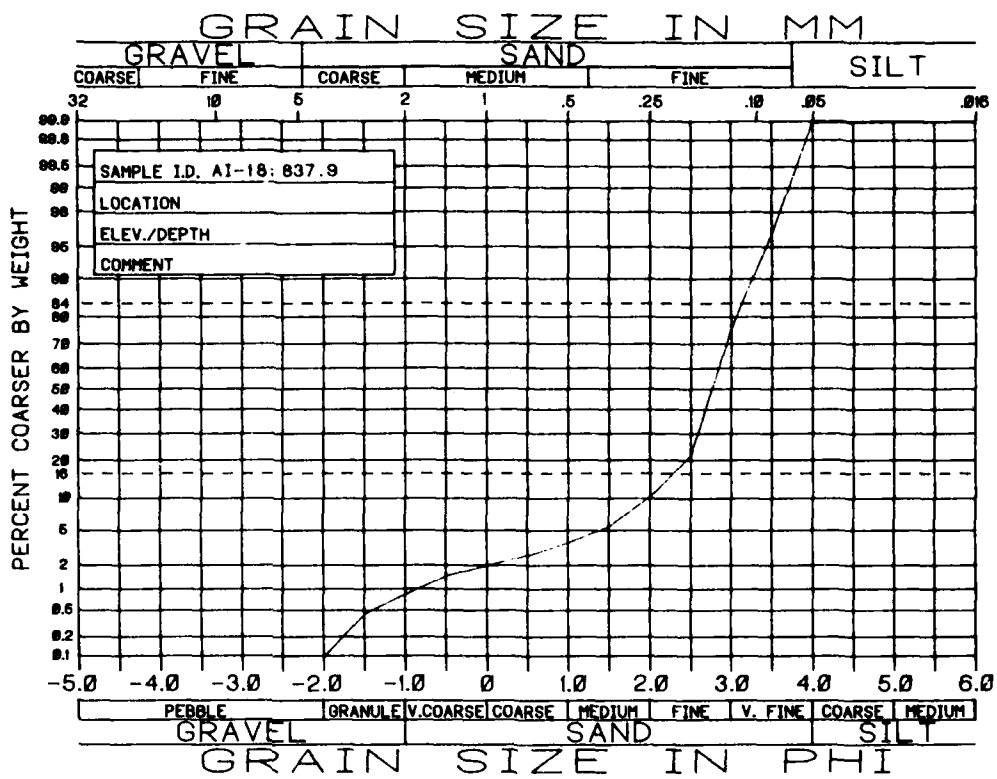


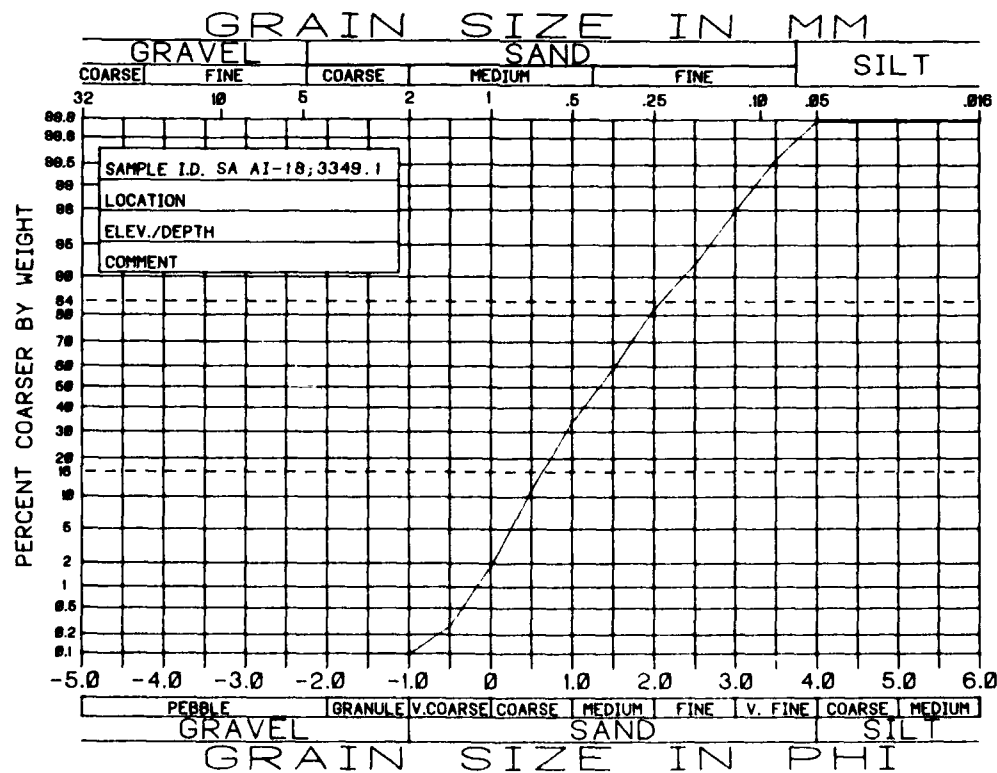
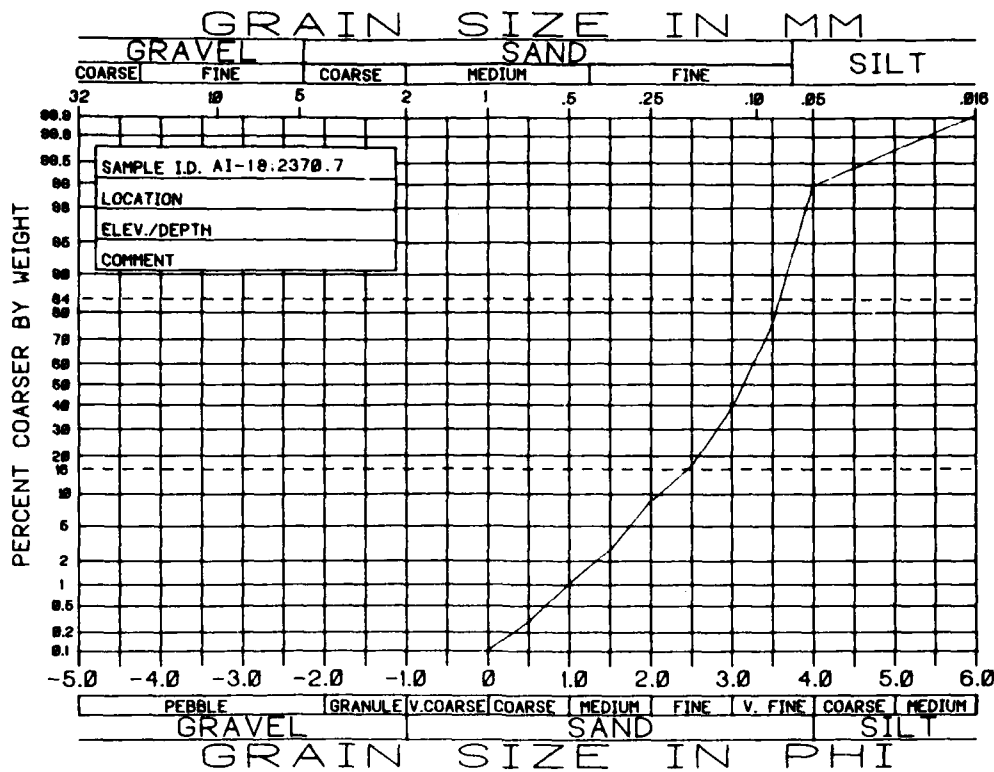


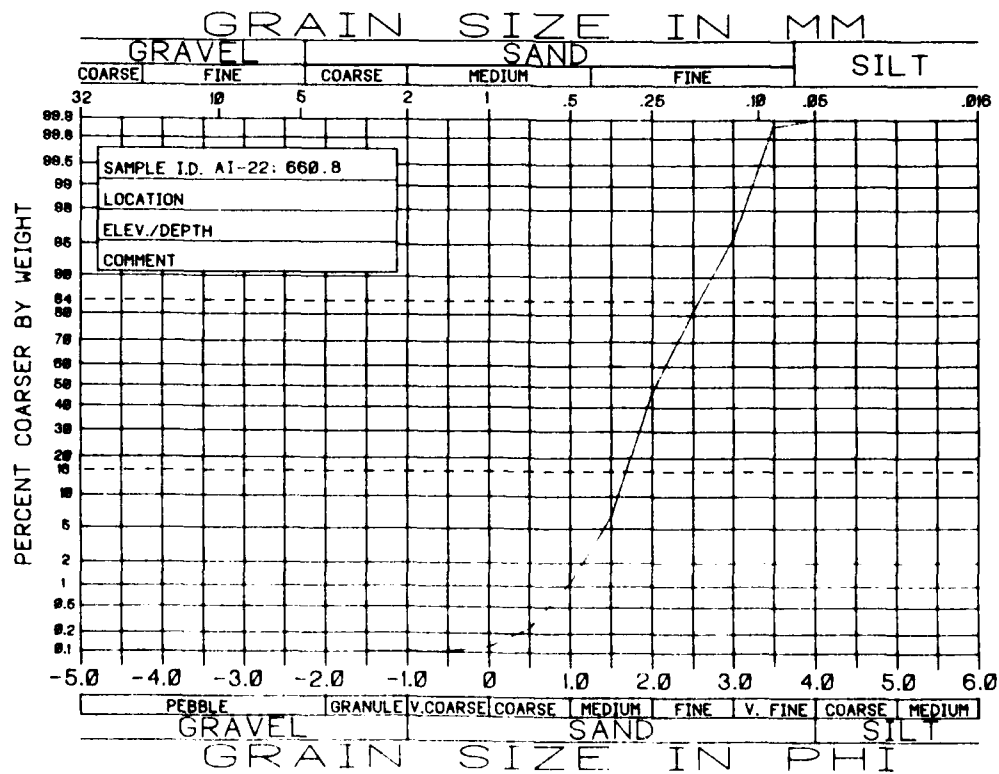
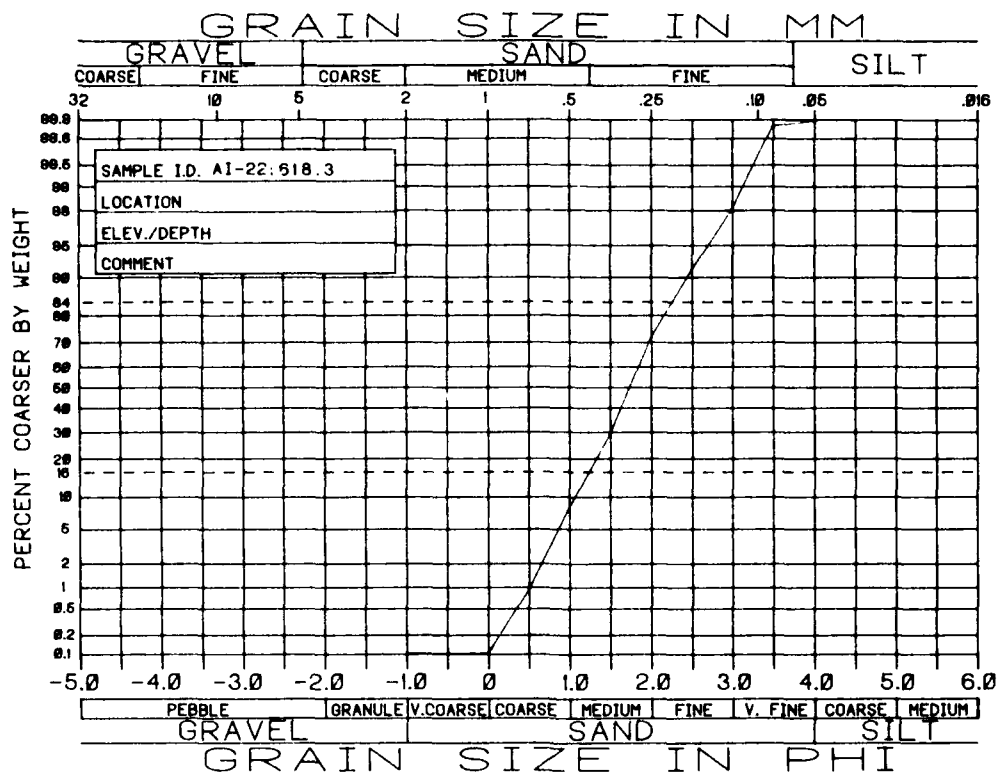


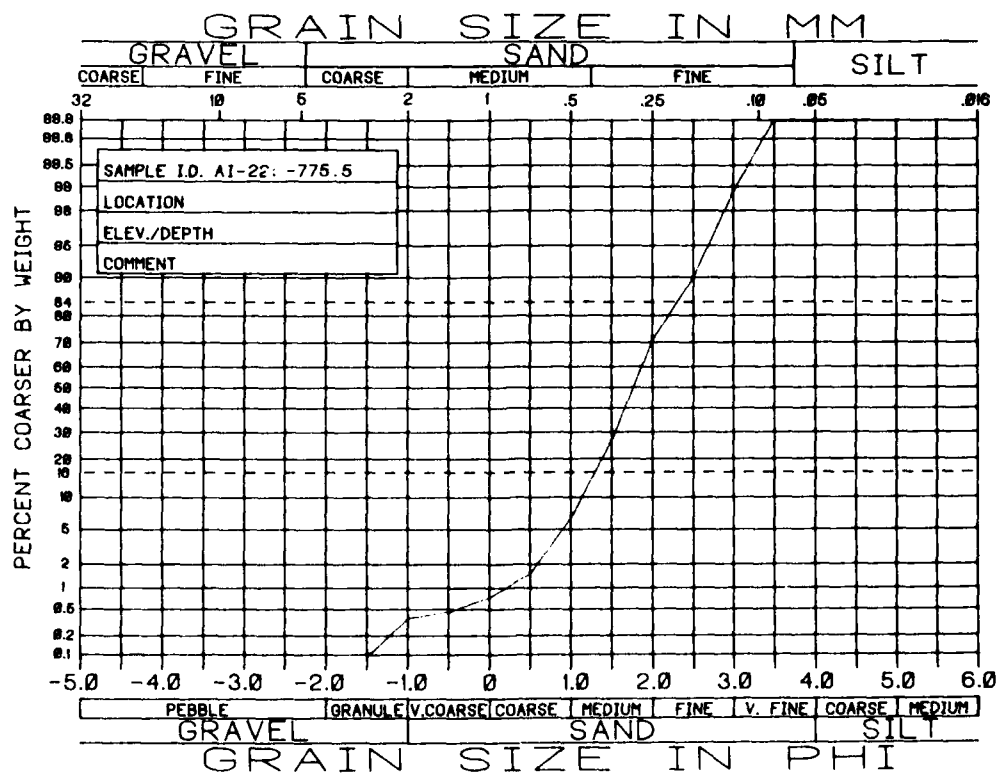
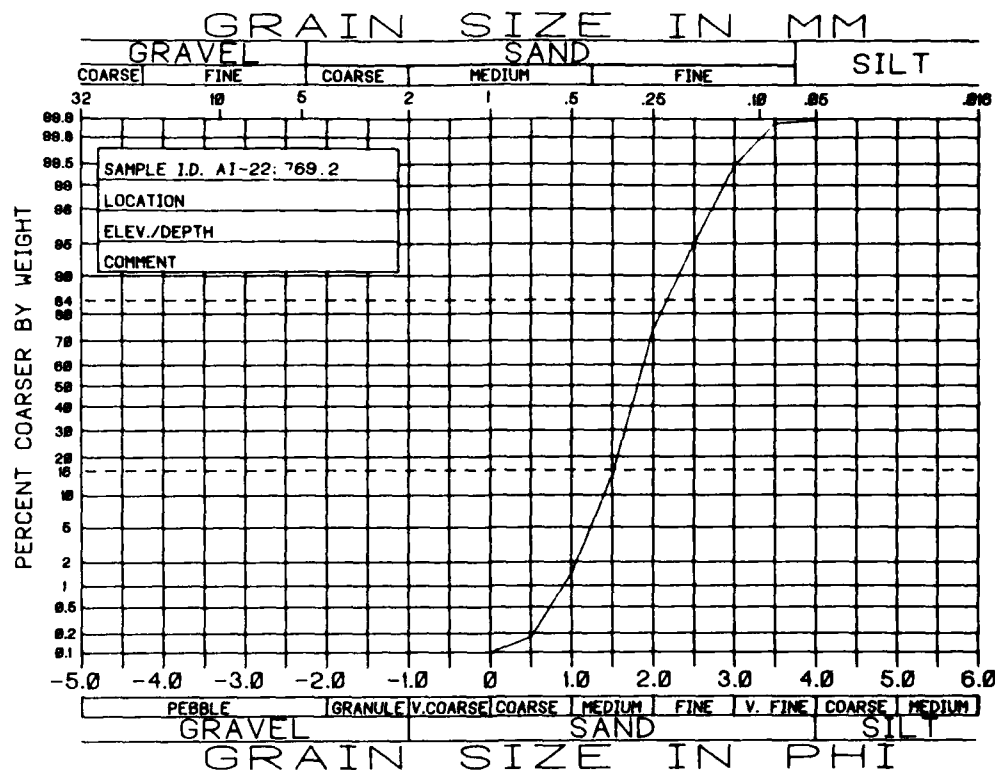


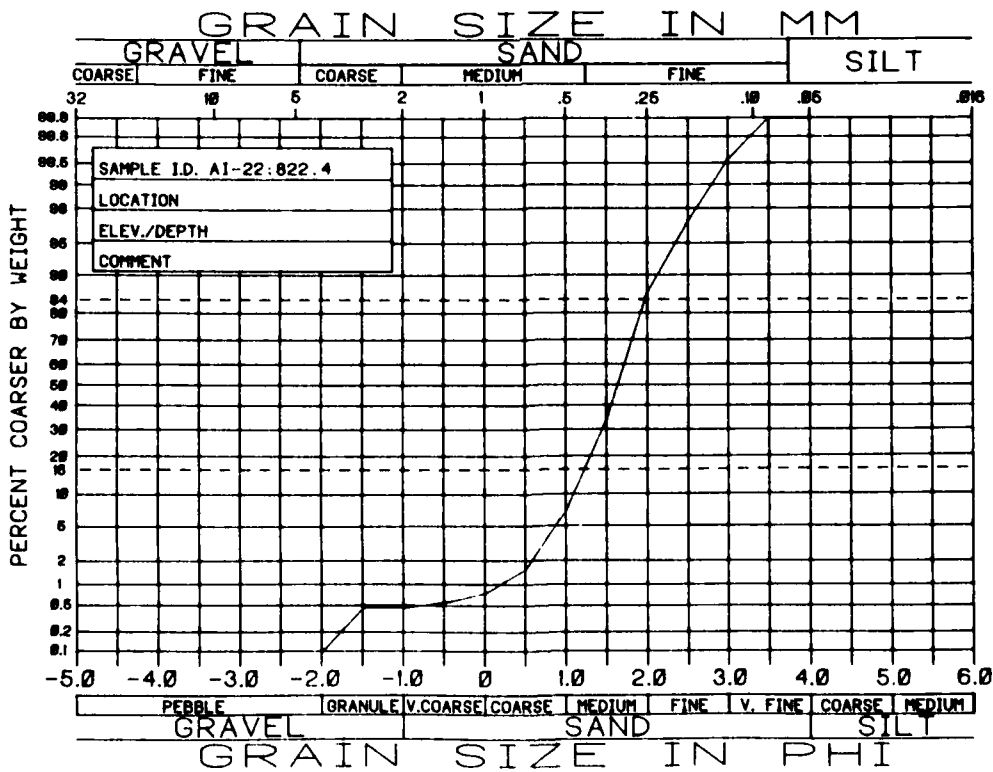
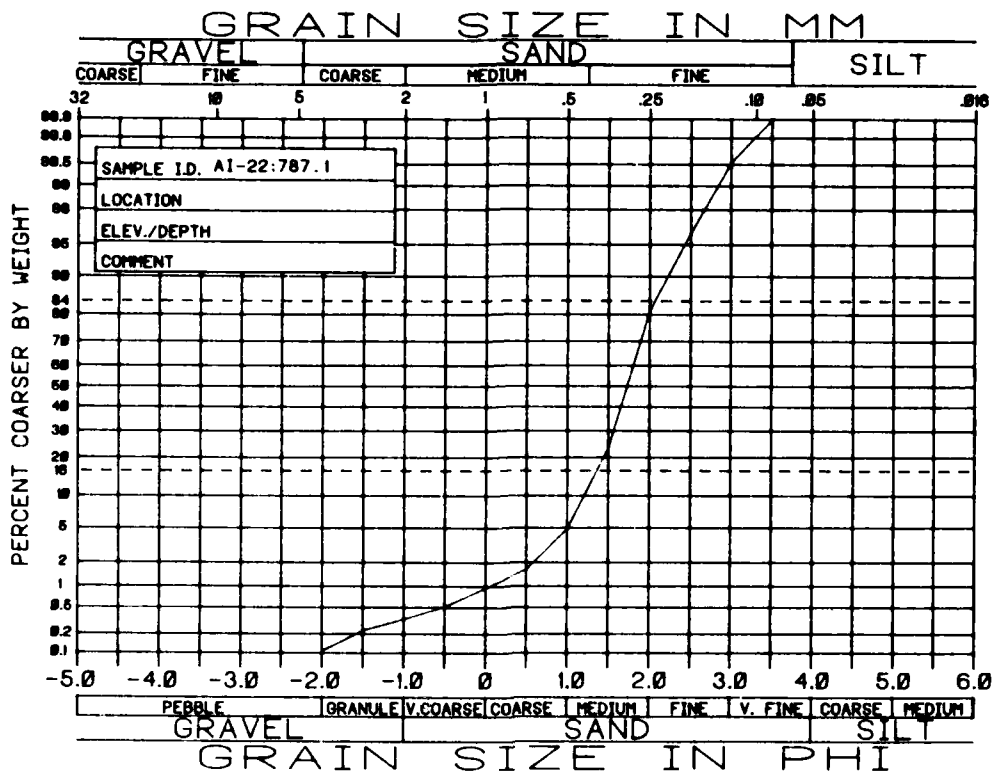


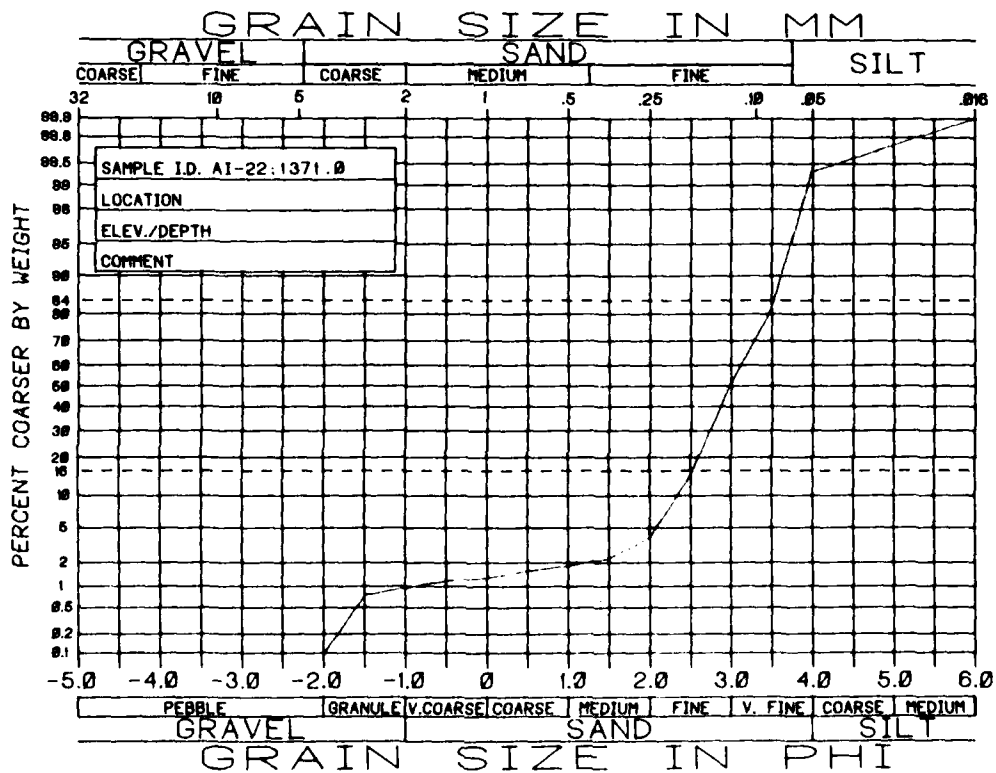
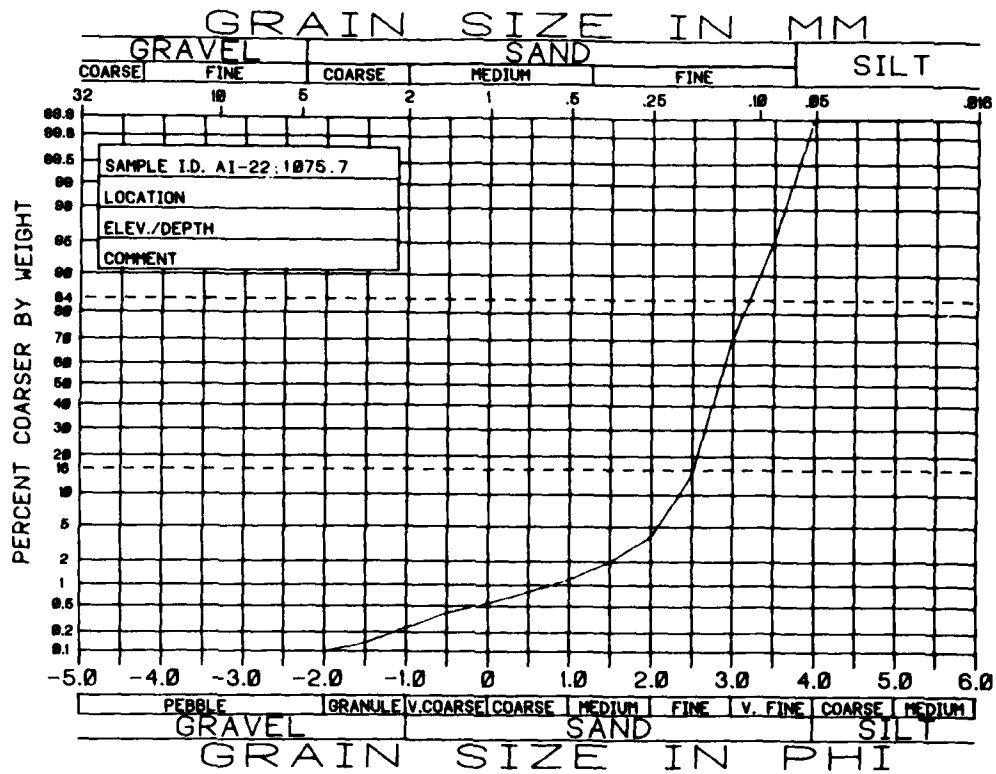


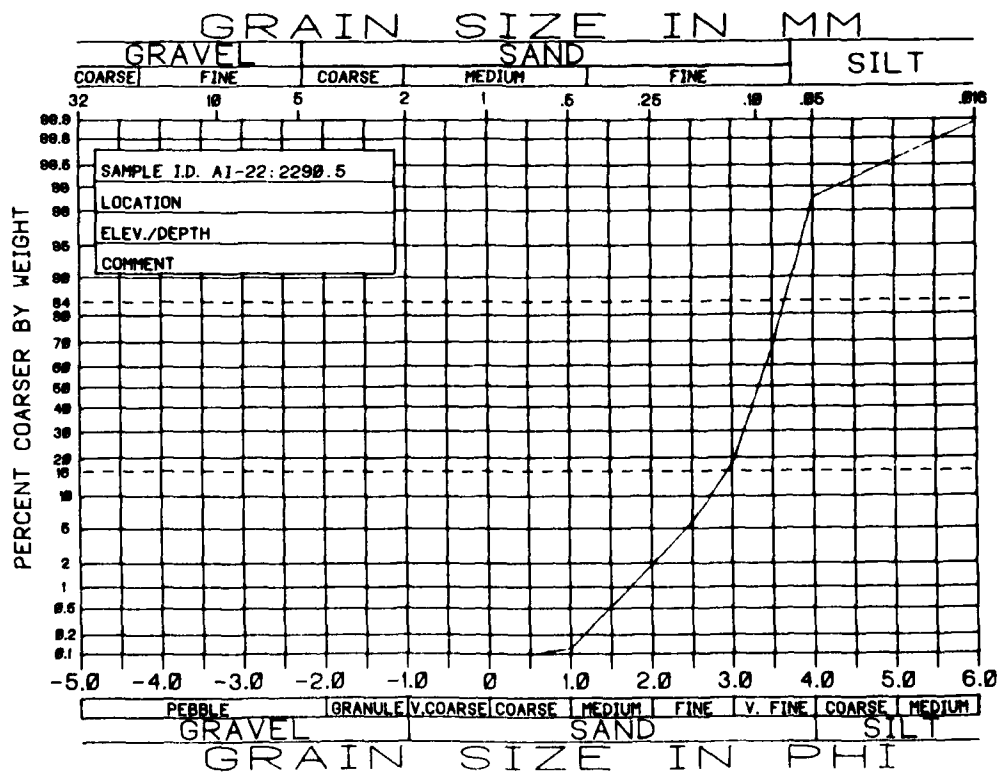
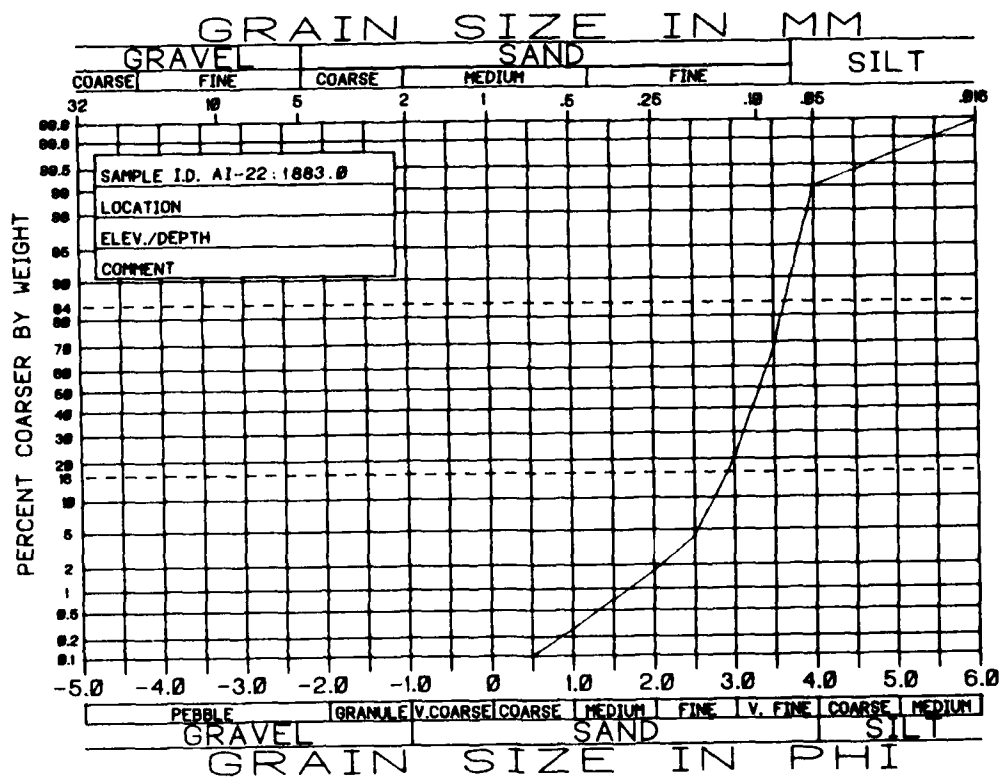


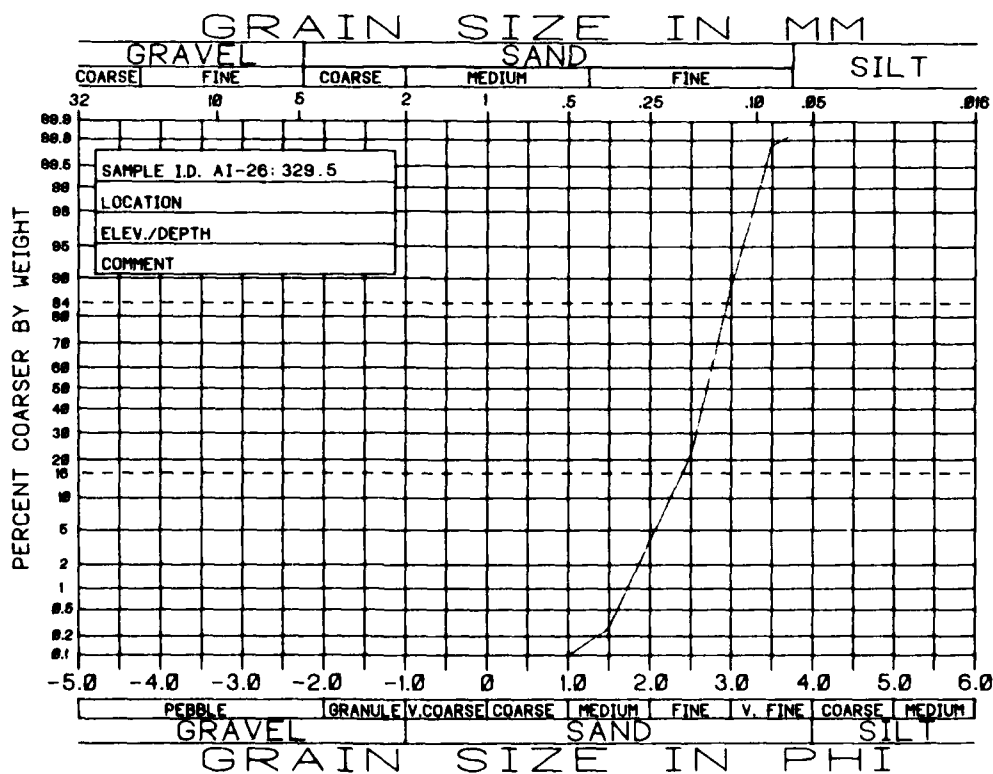
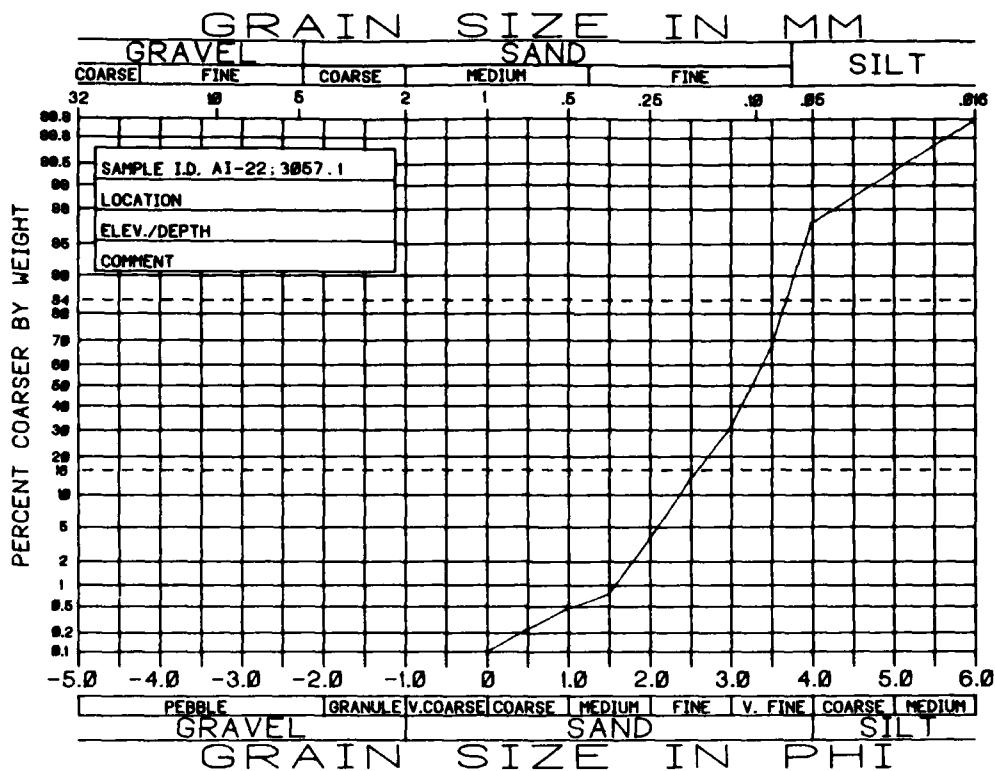


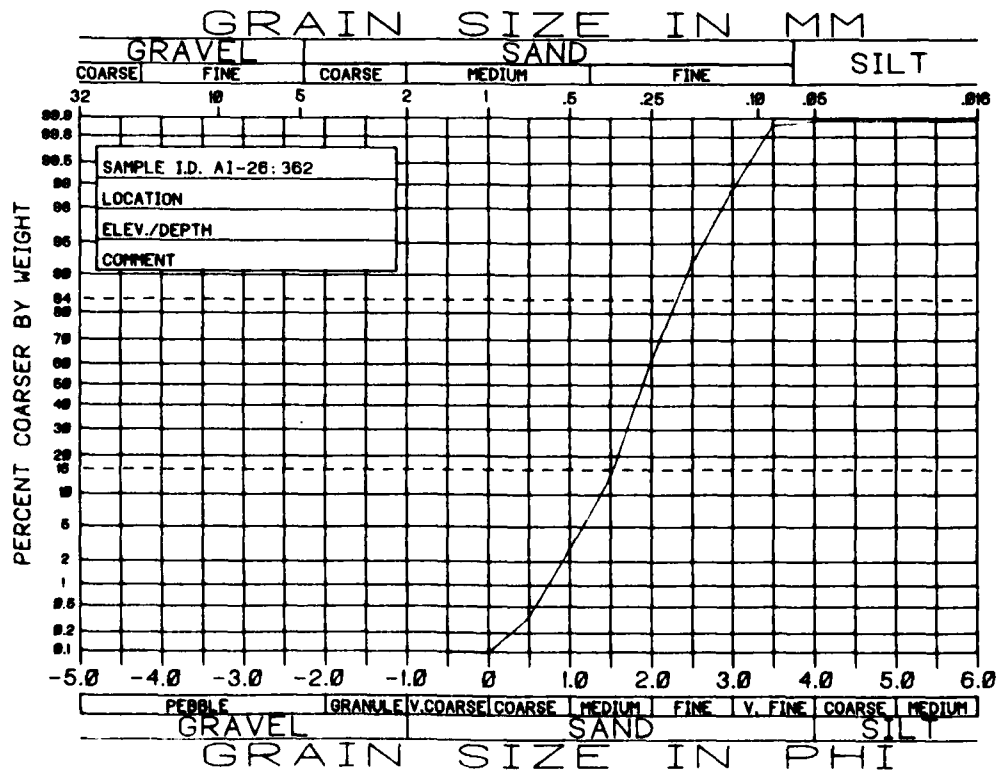
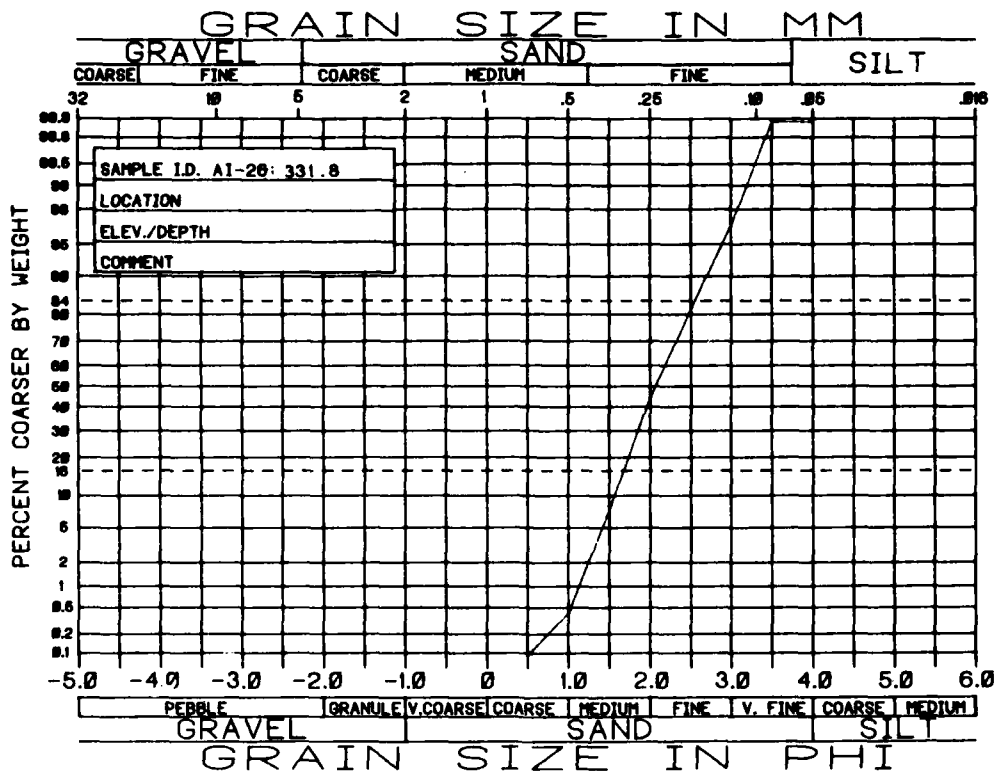


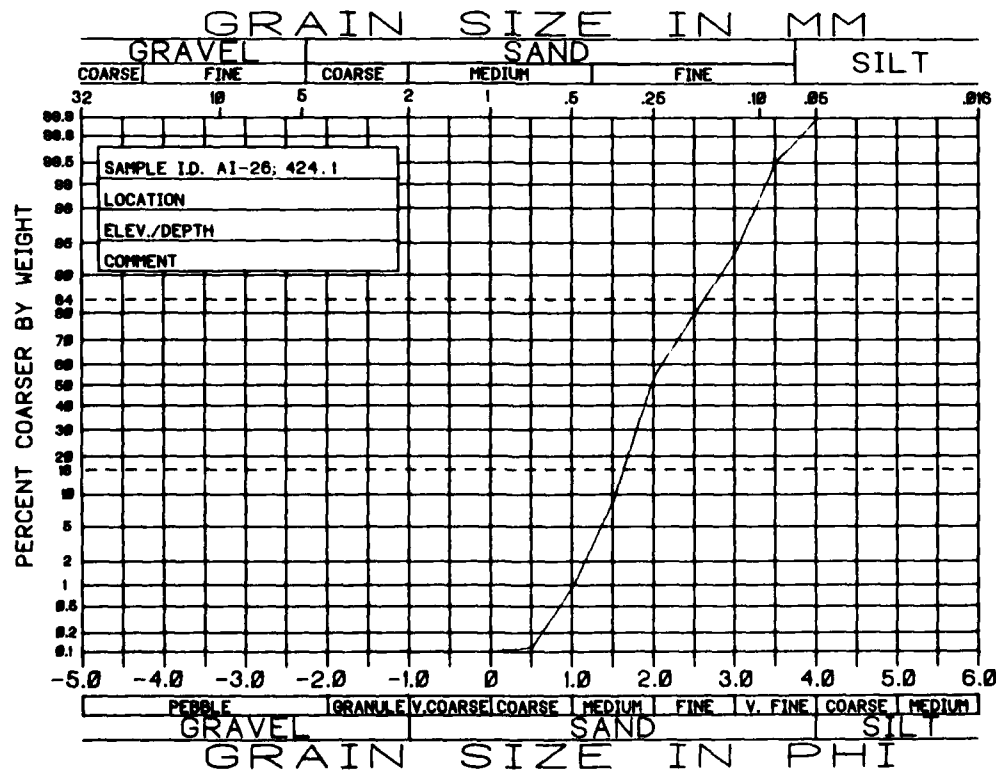
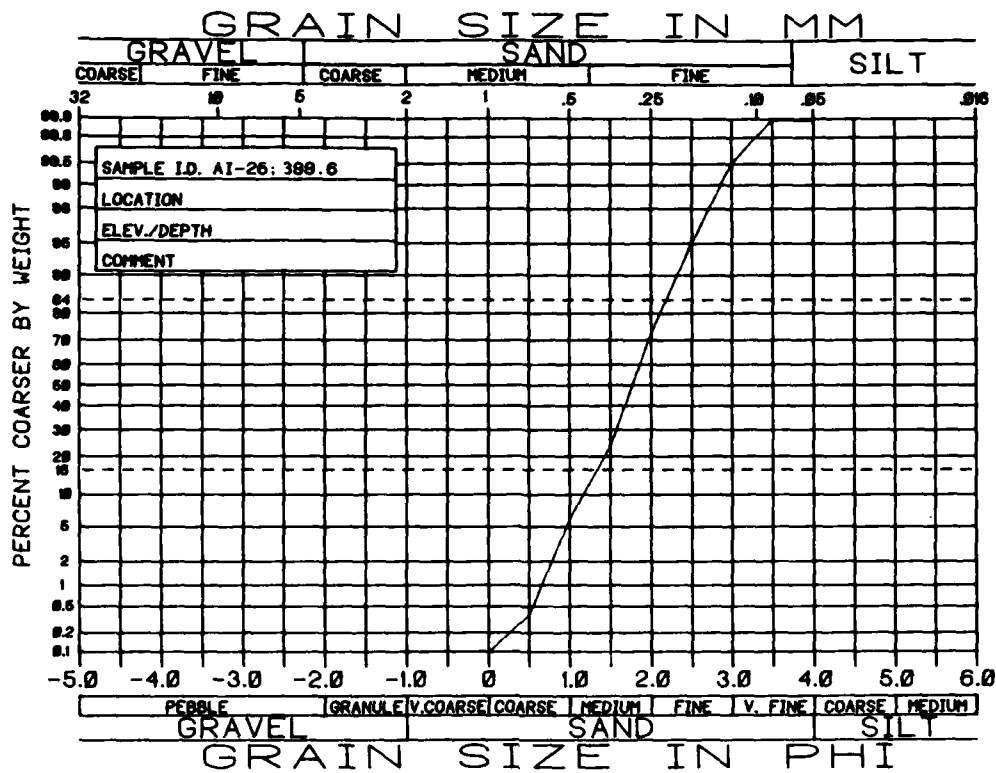


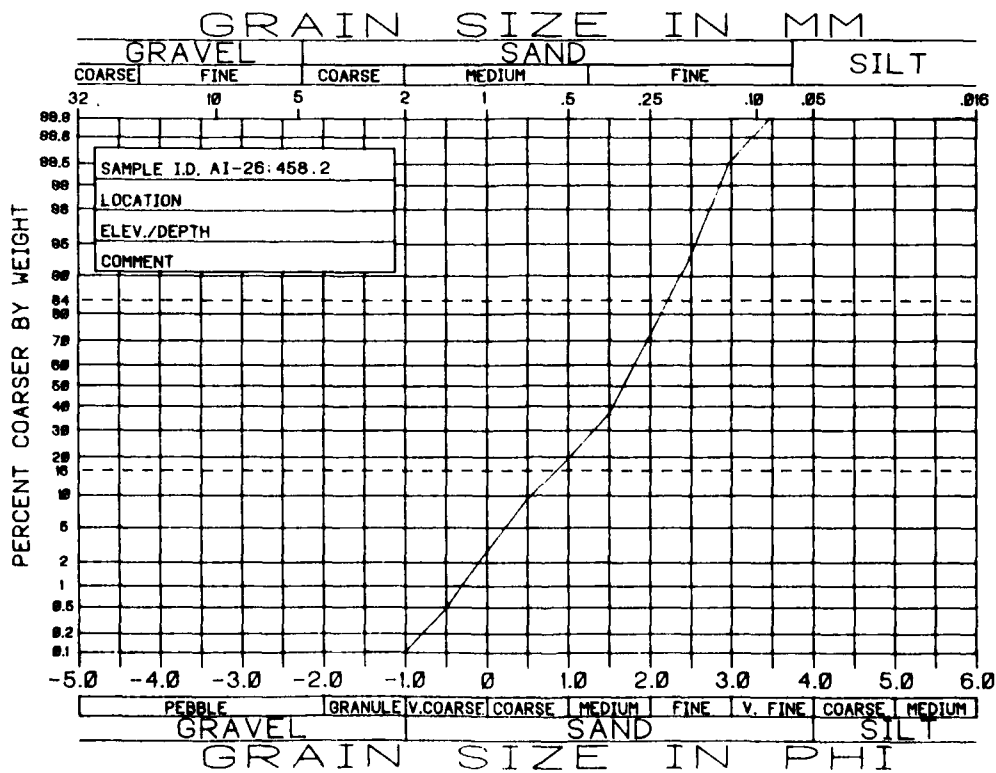
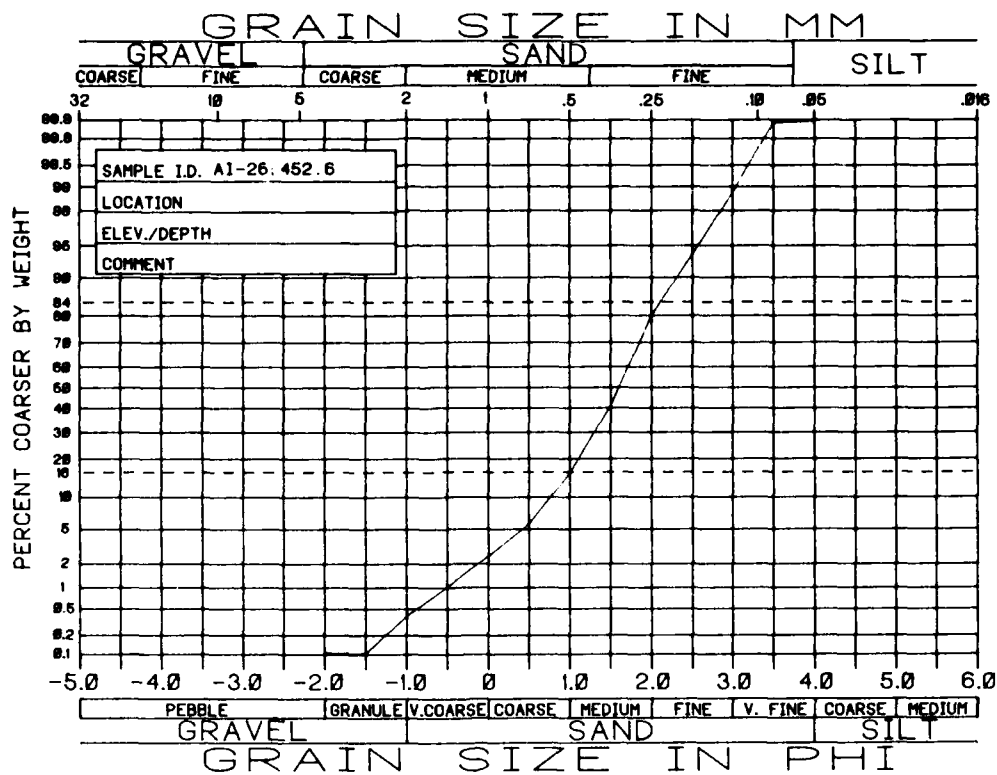


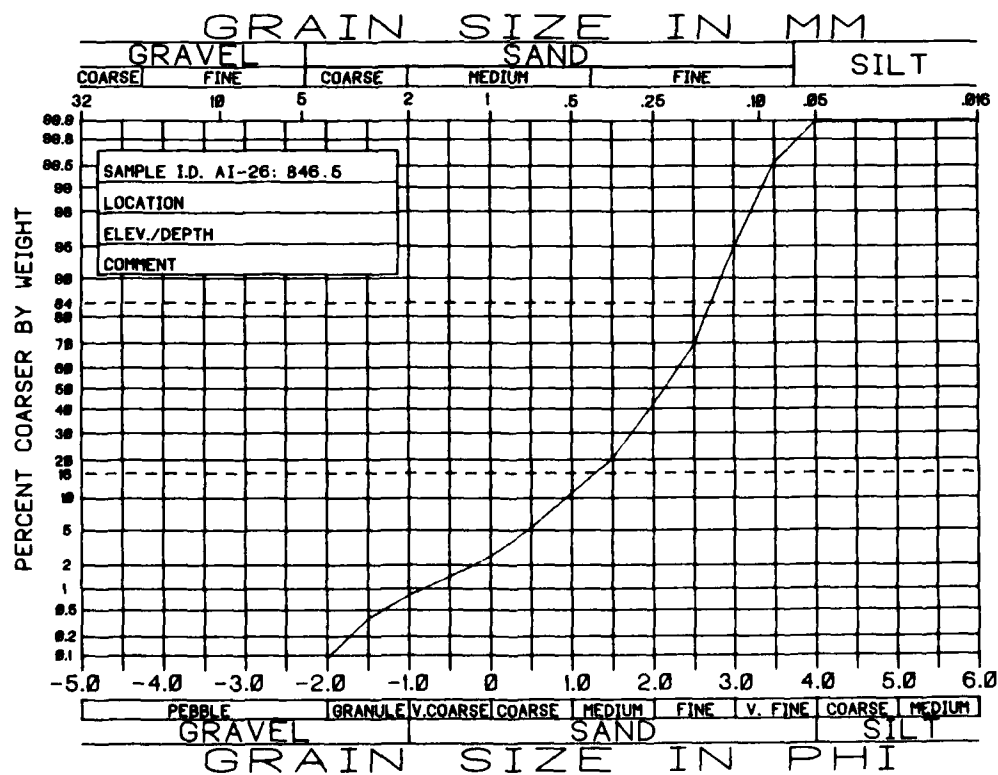
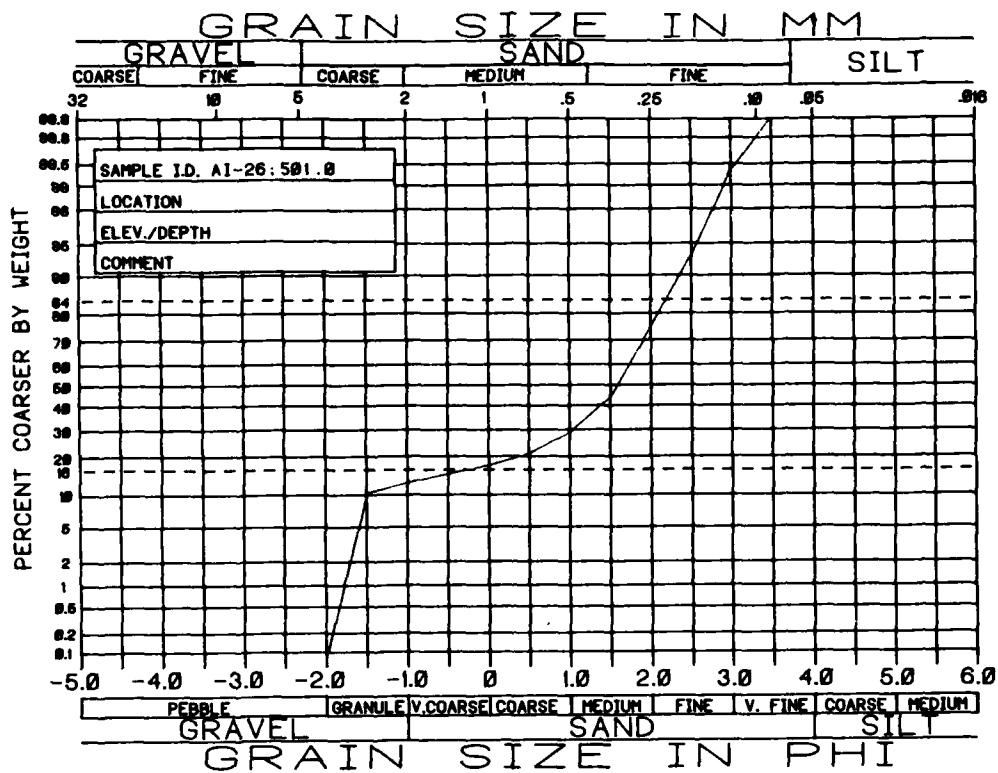


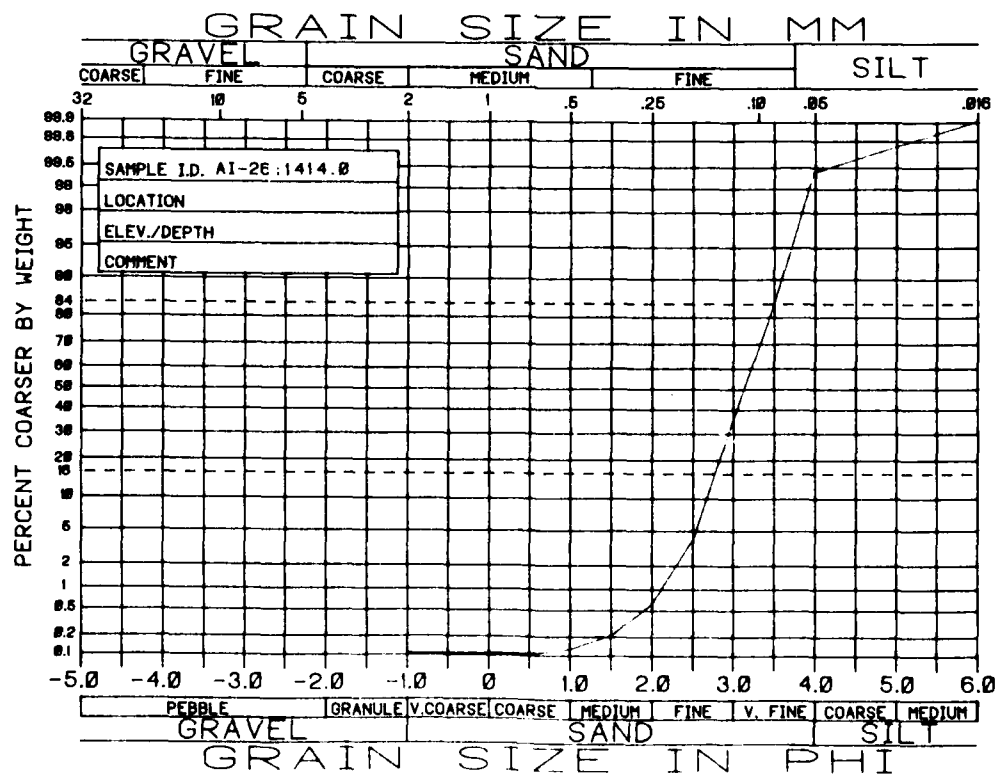
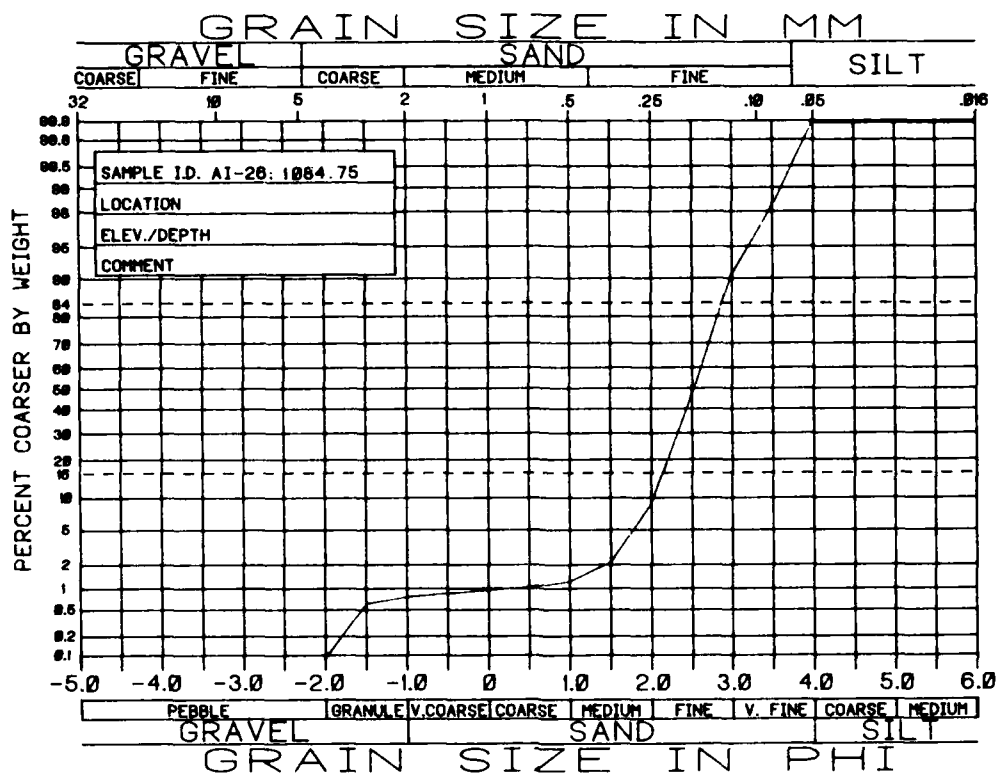


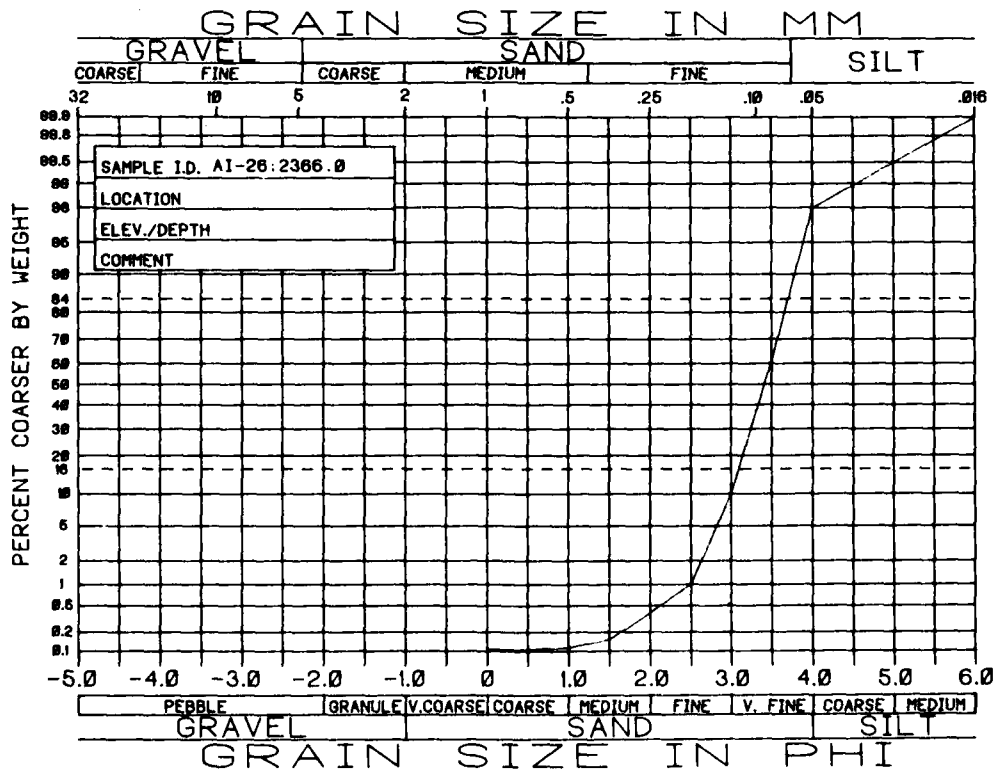
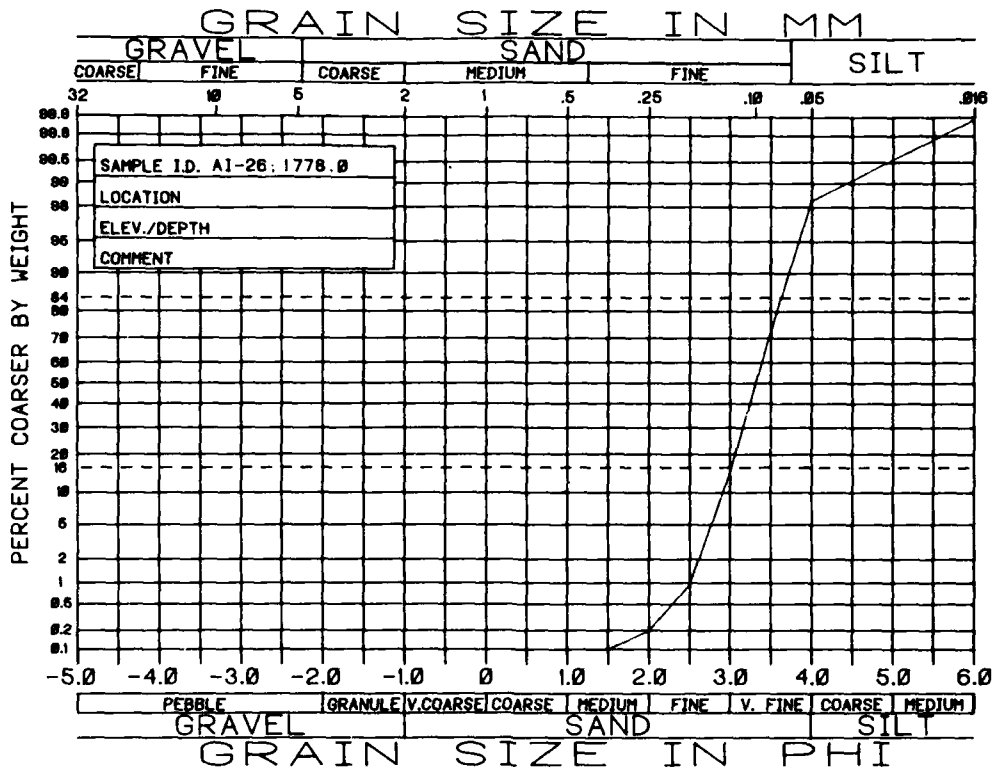


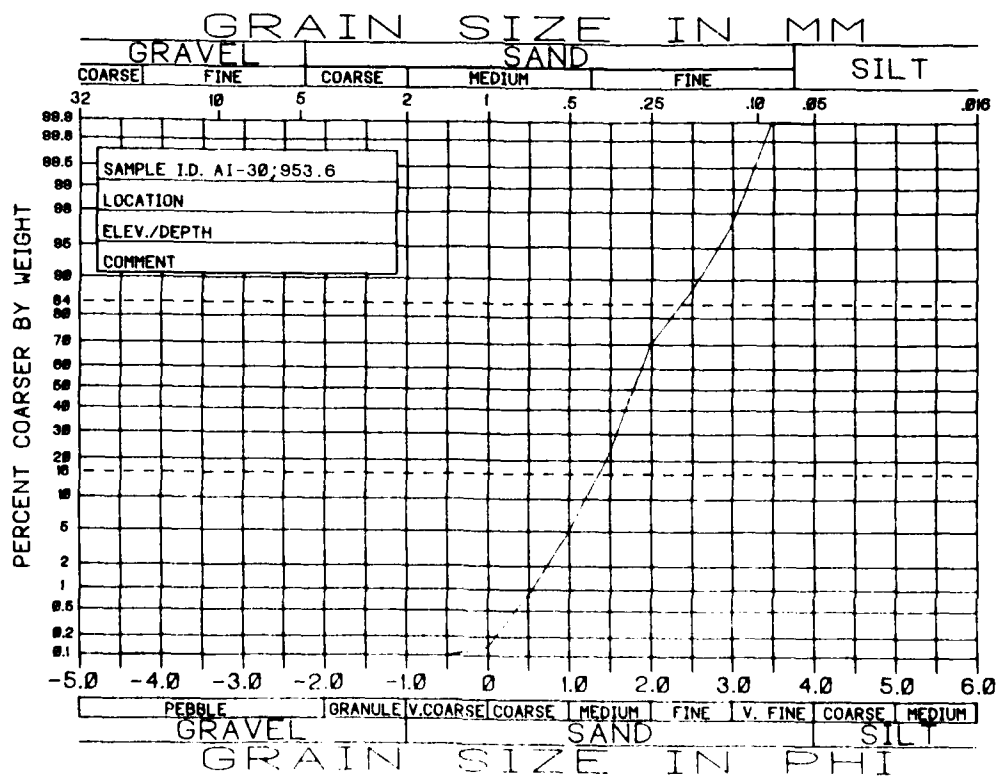
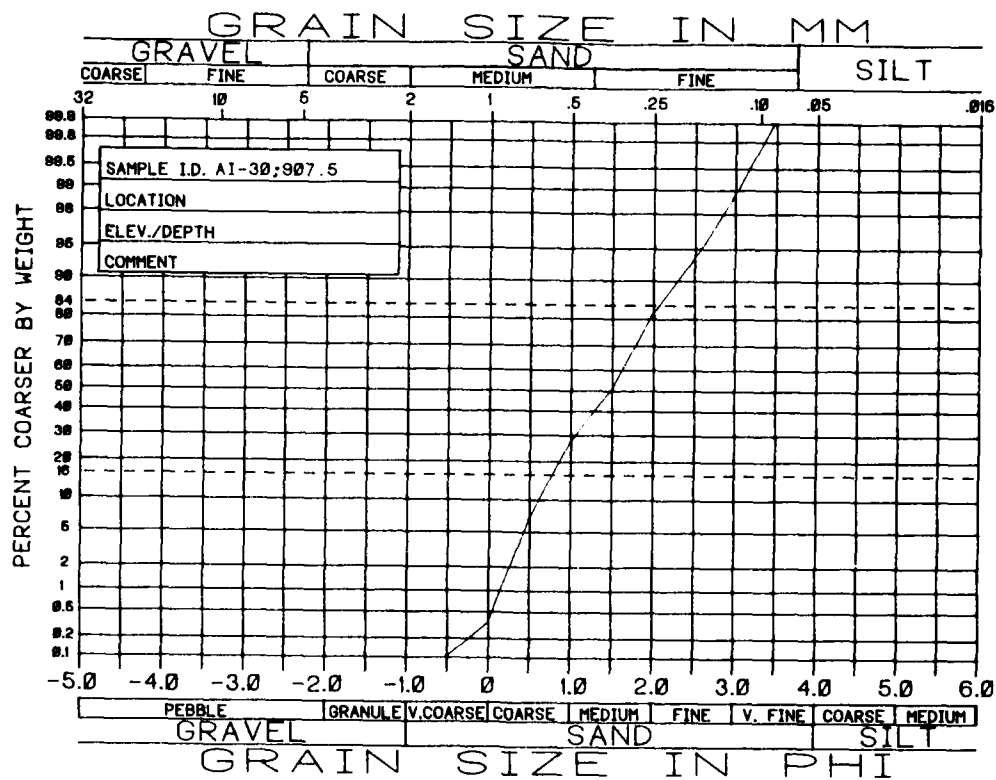


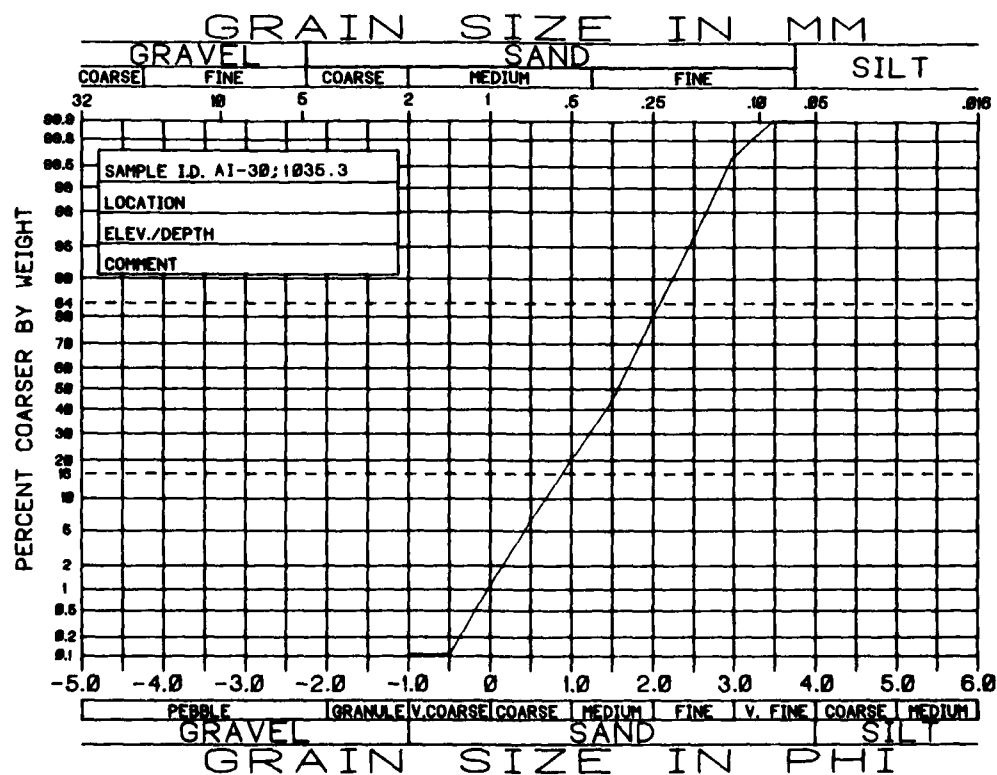
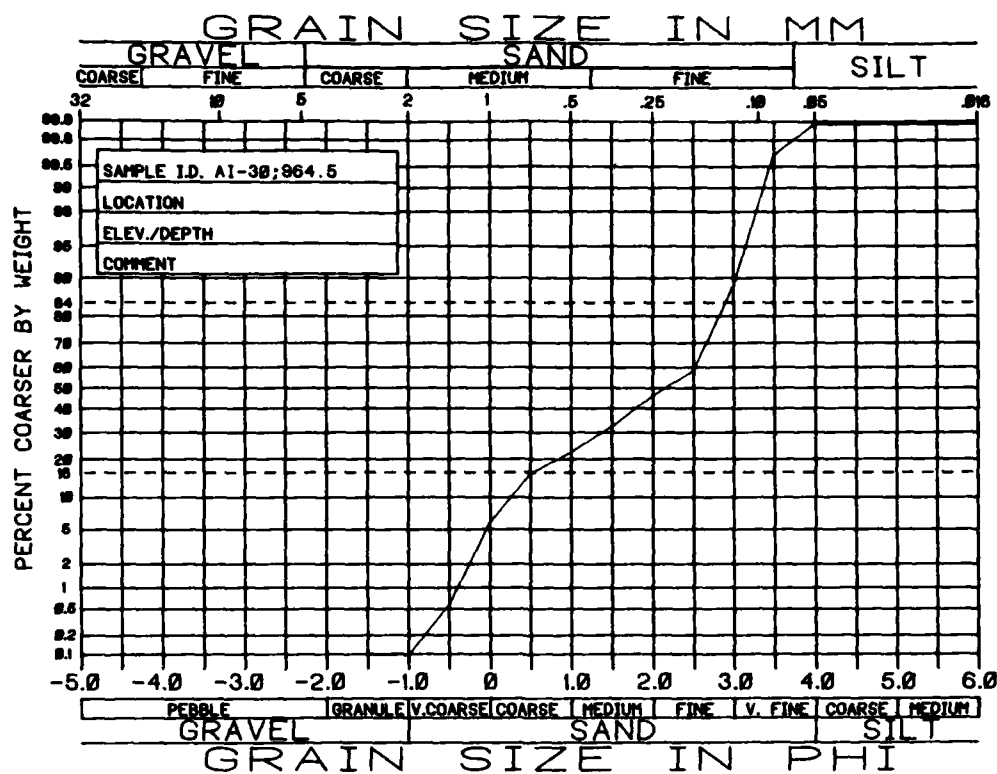


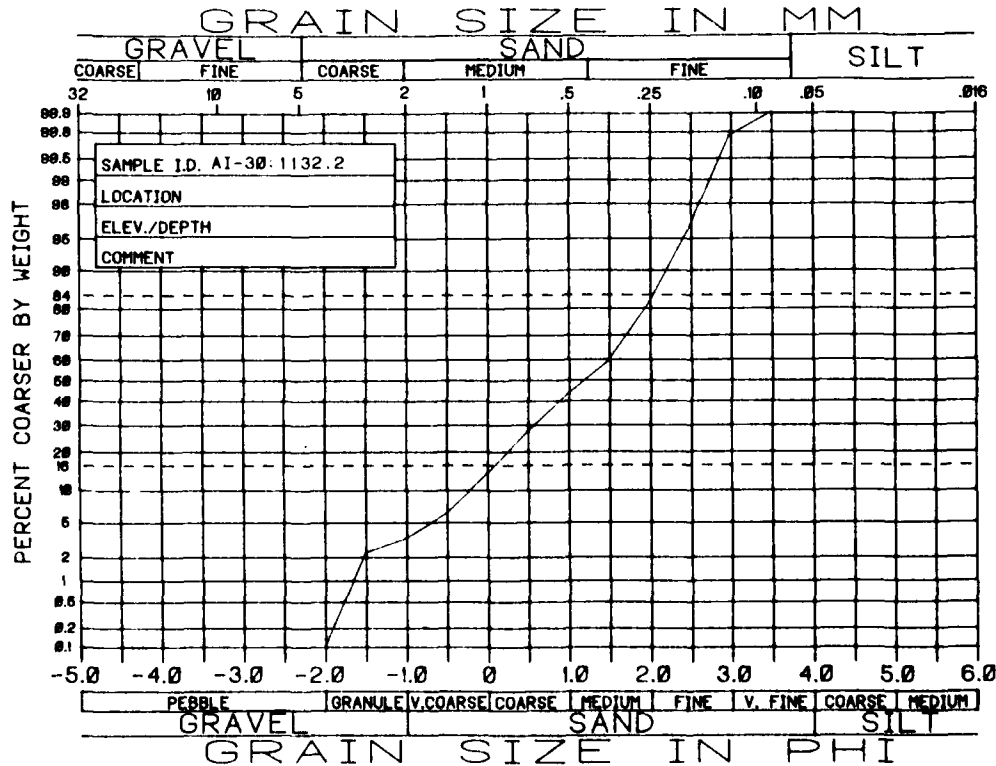
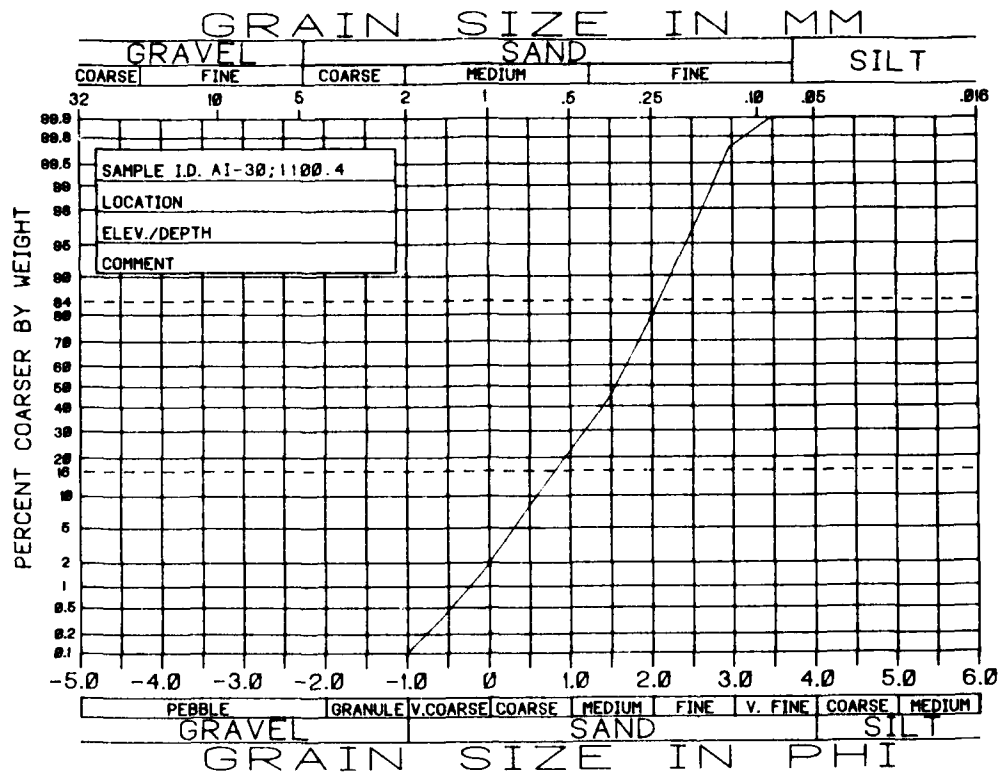


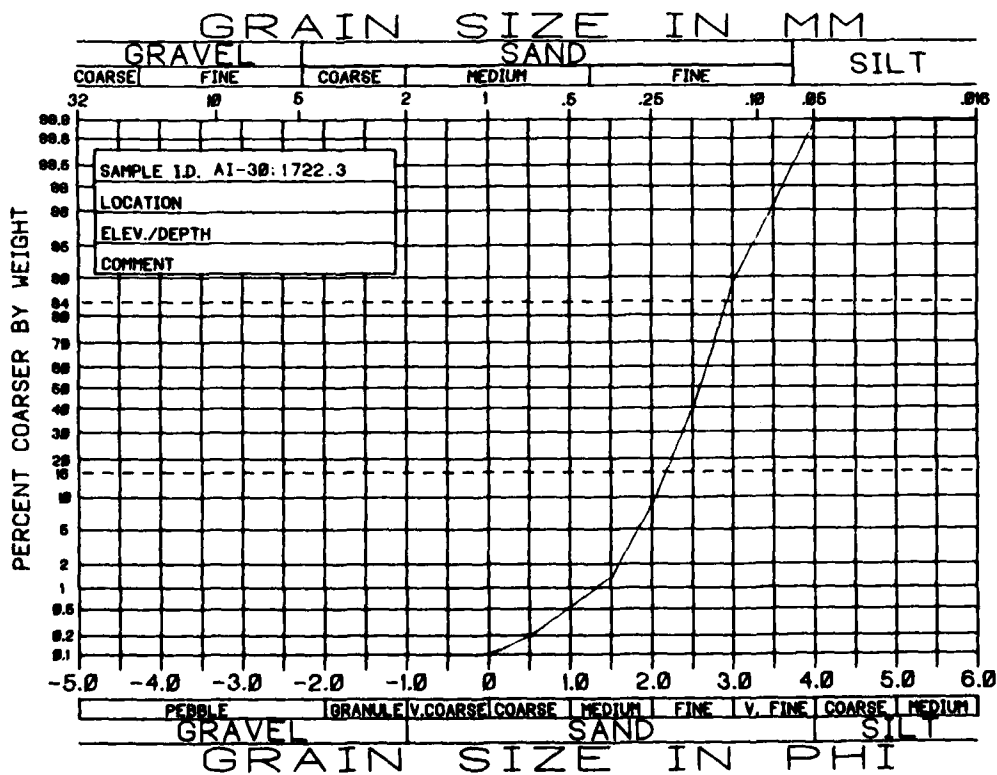
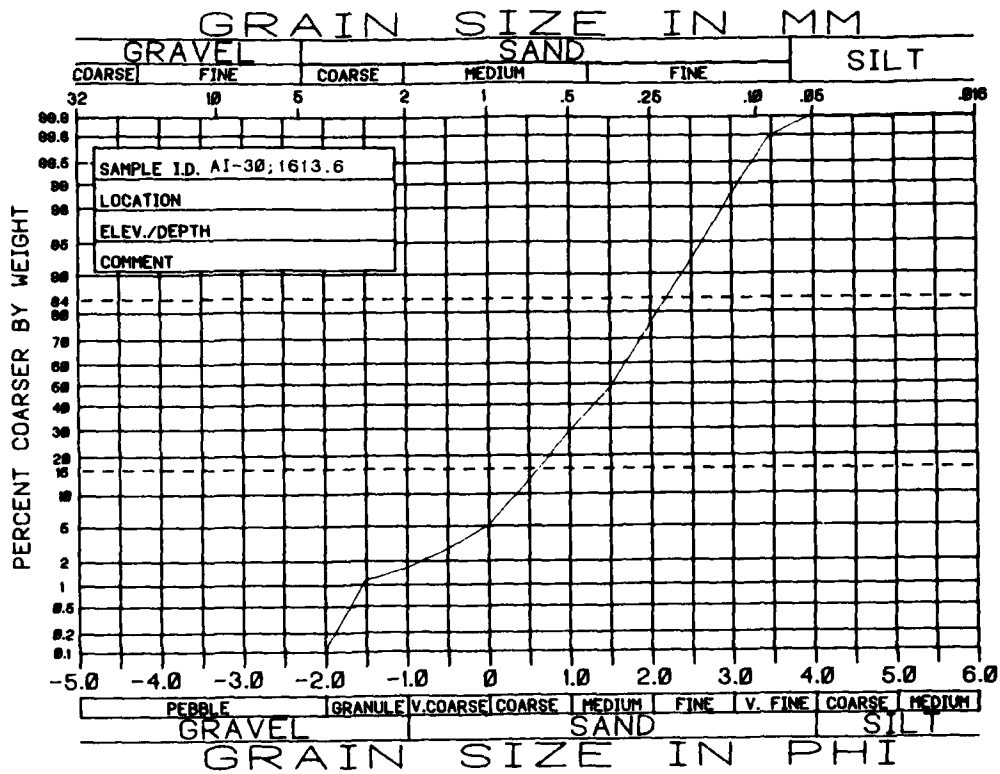


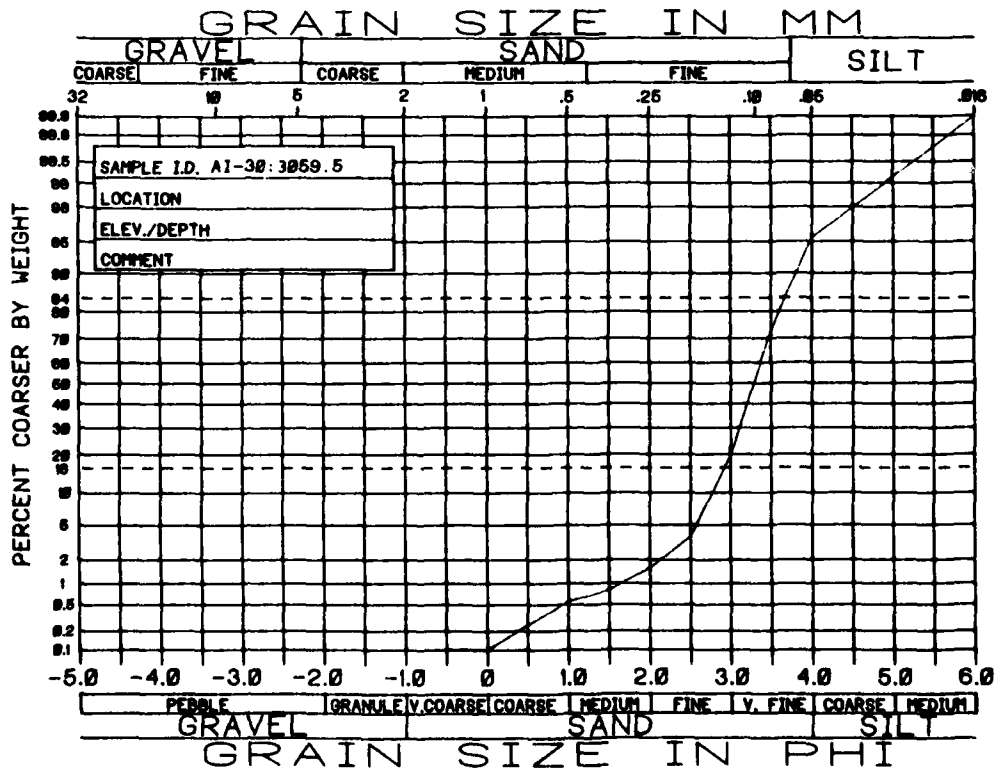
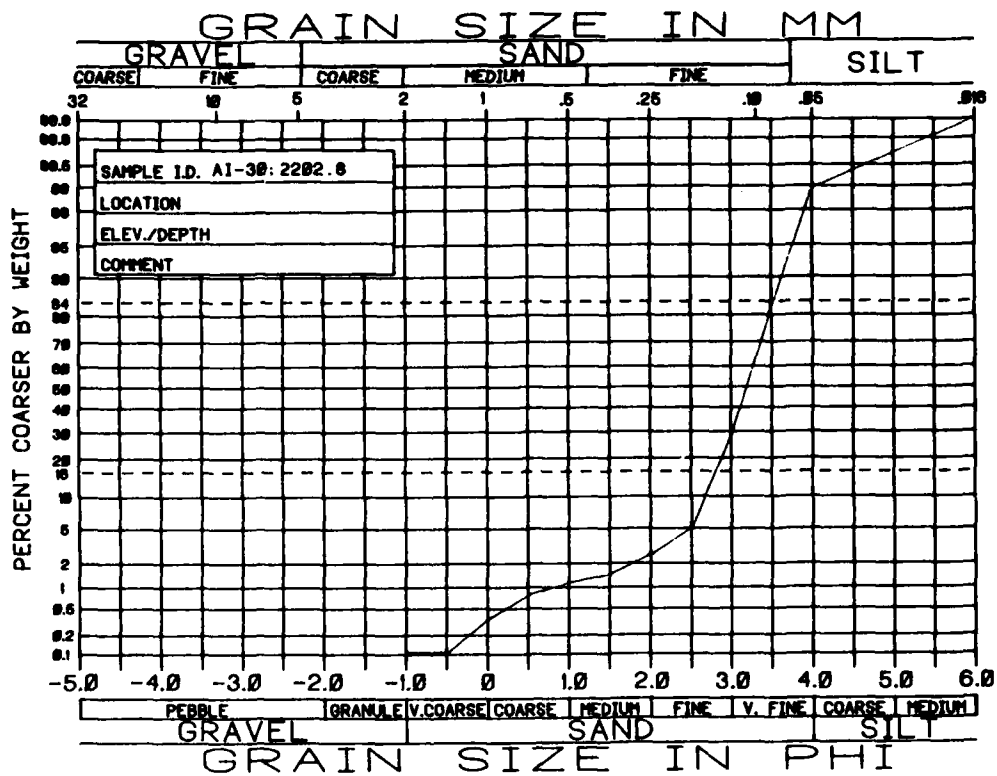




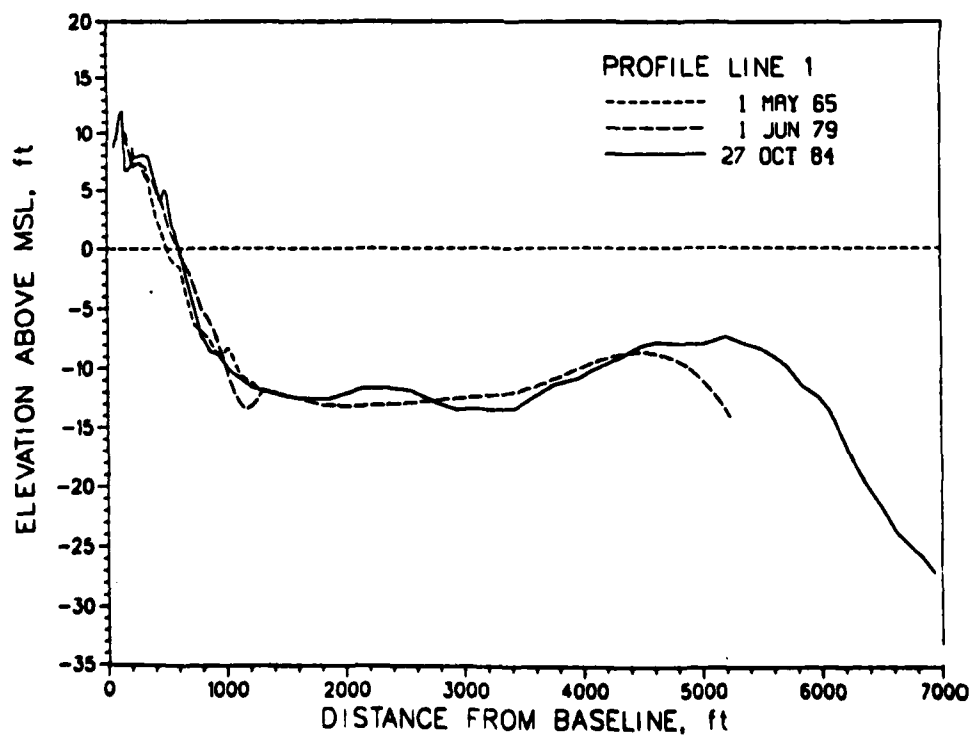
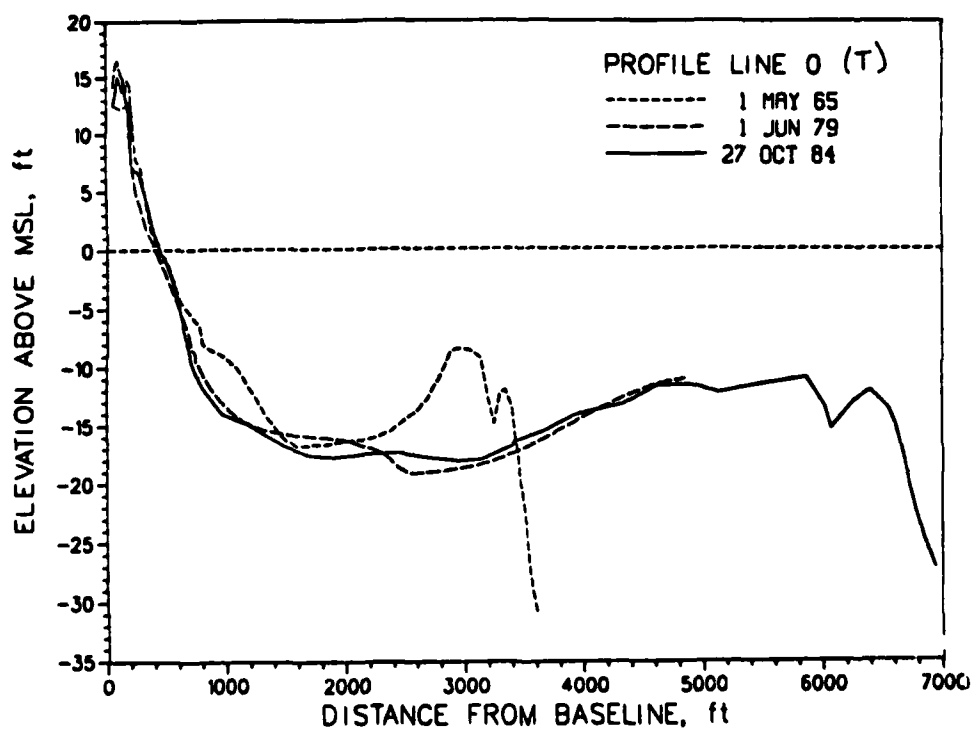


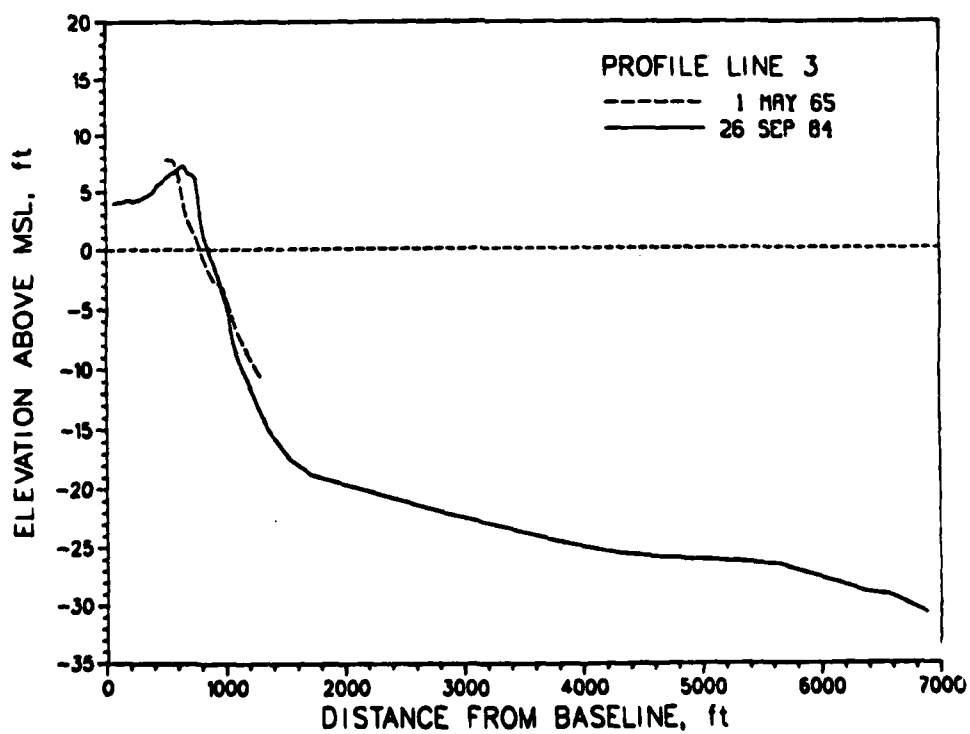
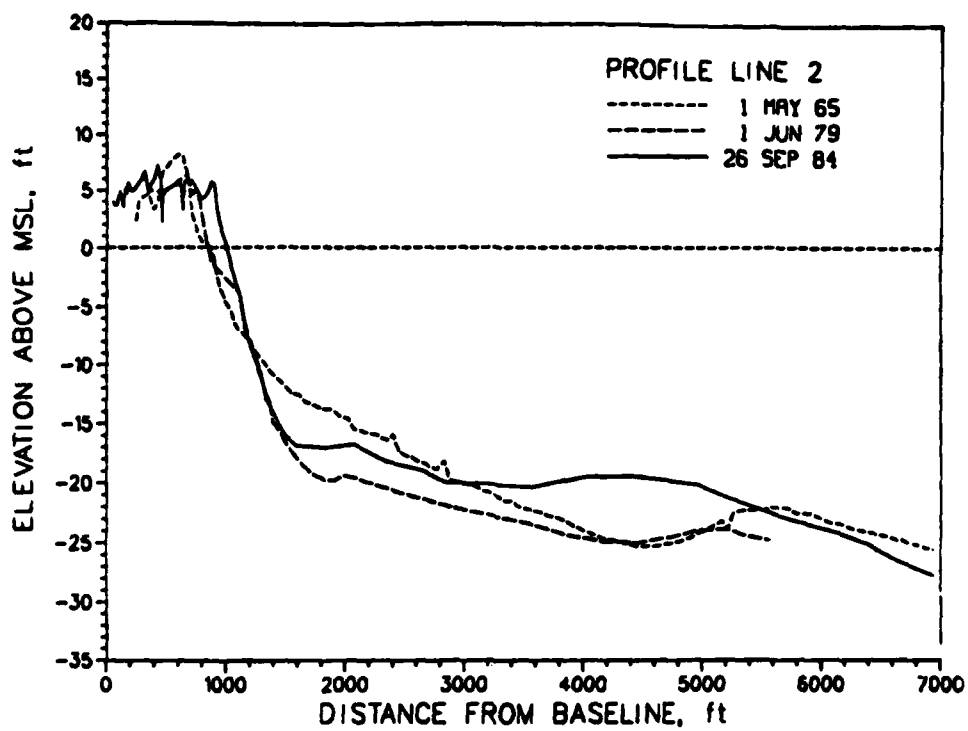


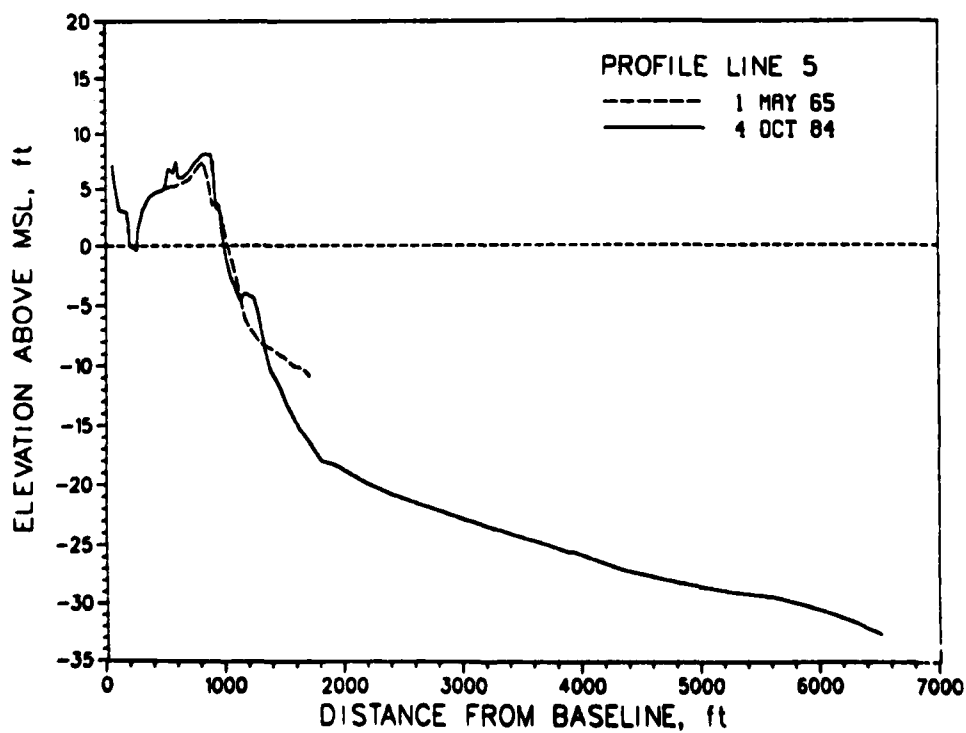
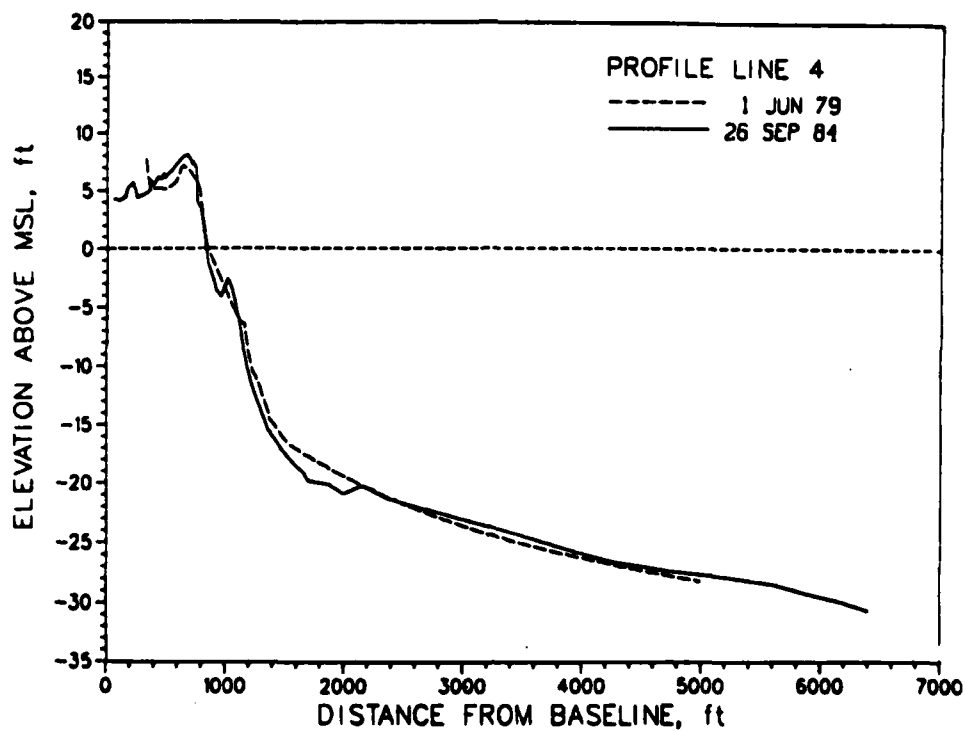


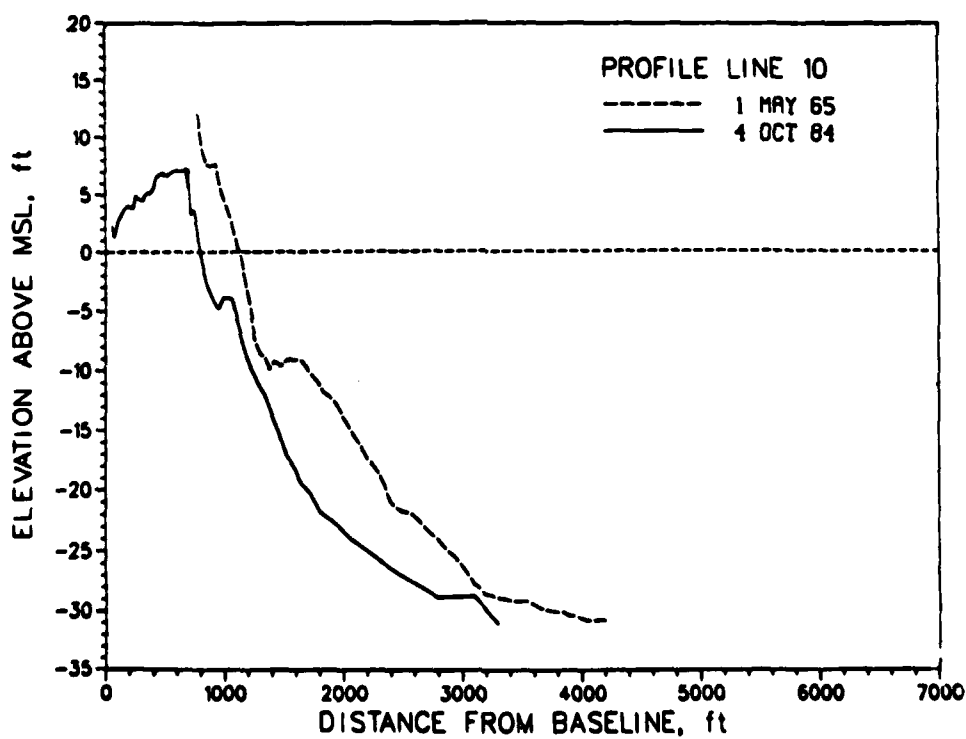
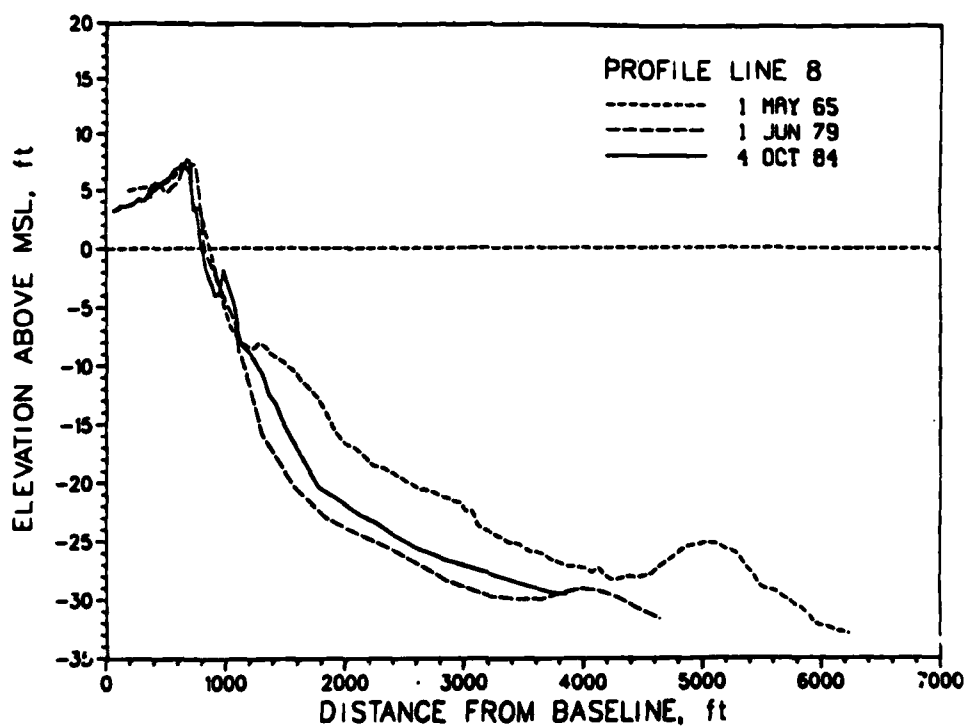


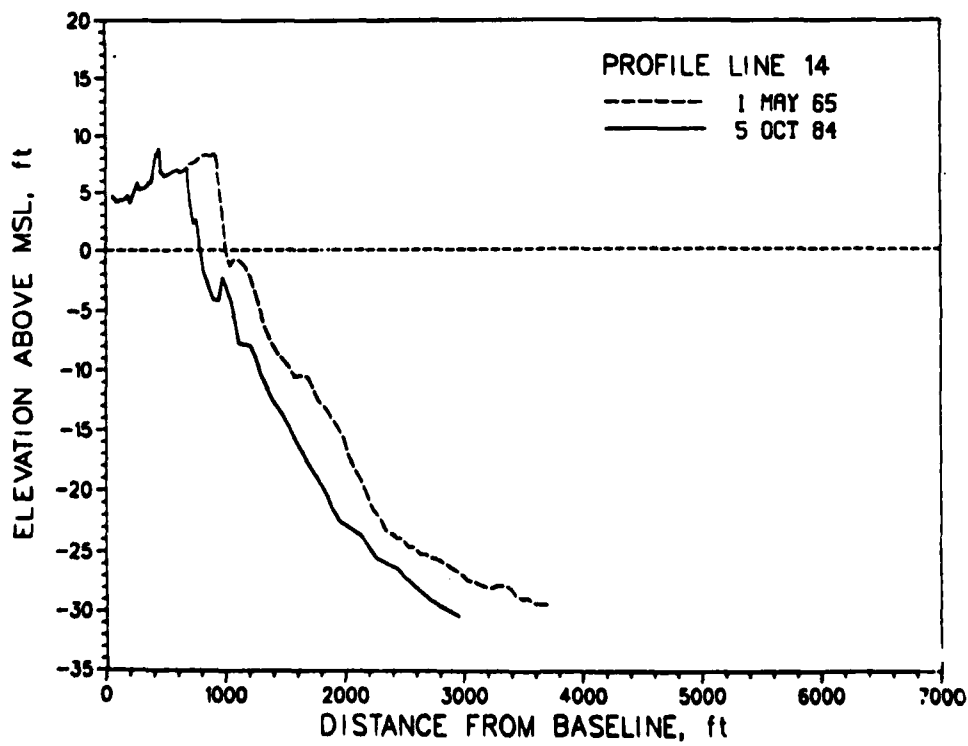
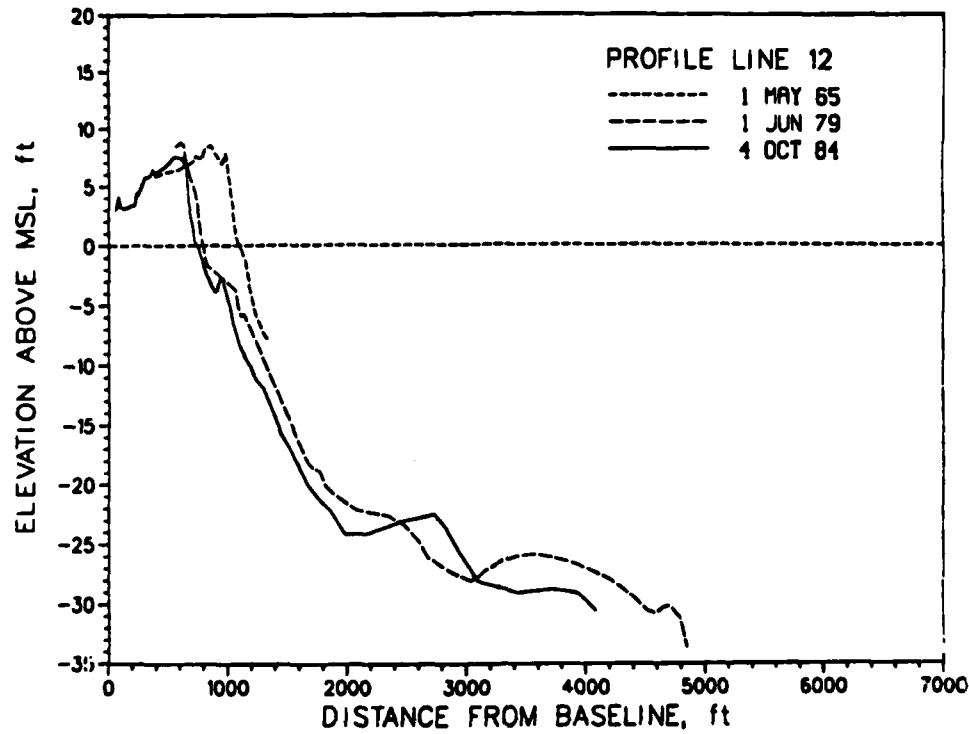
APPENDIX D
ASSATEAGUE ISLAND COMPARISON PROFILE PLOTS

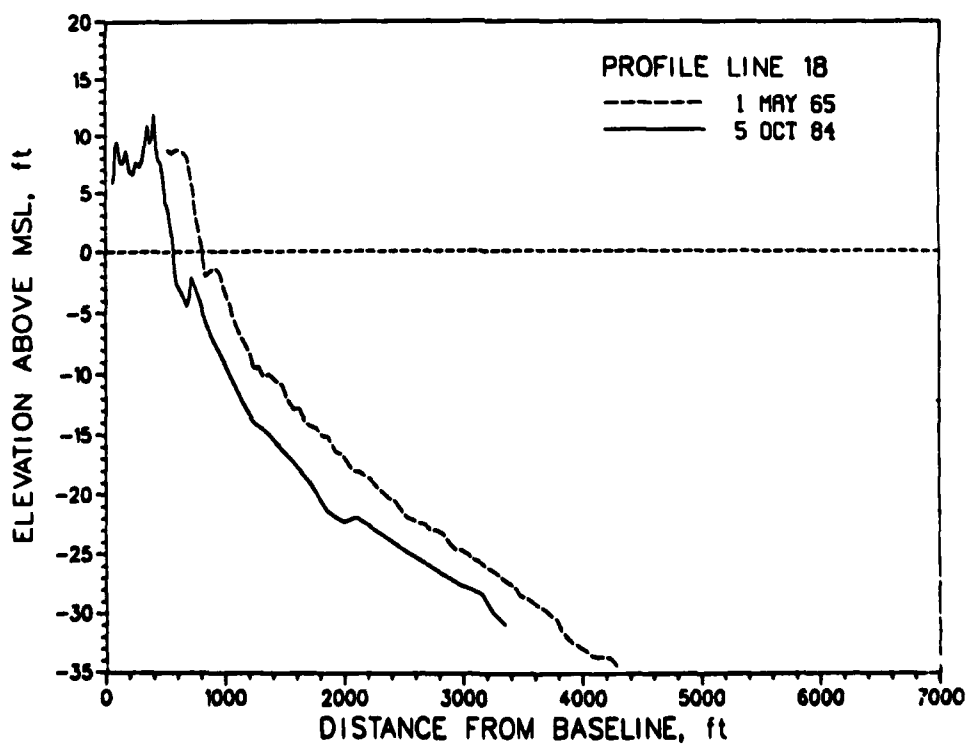
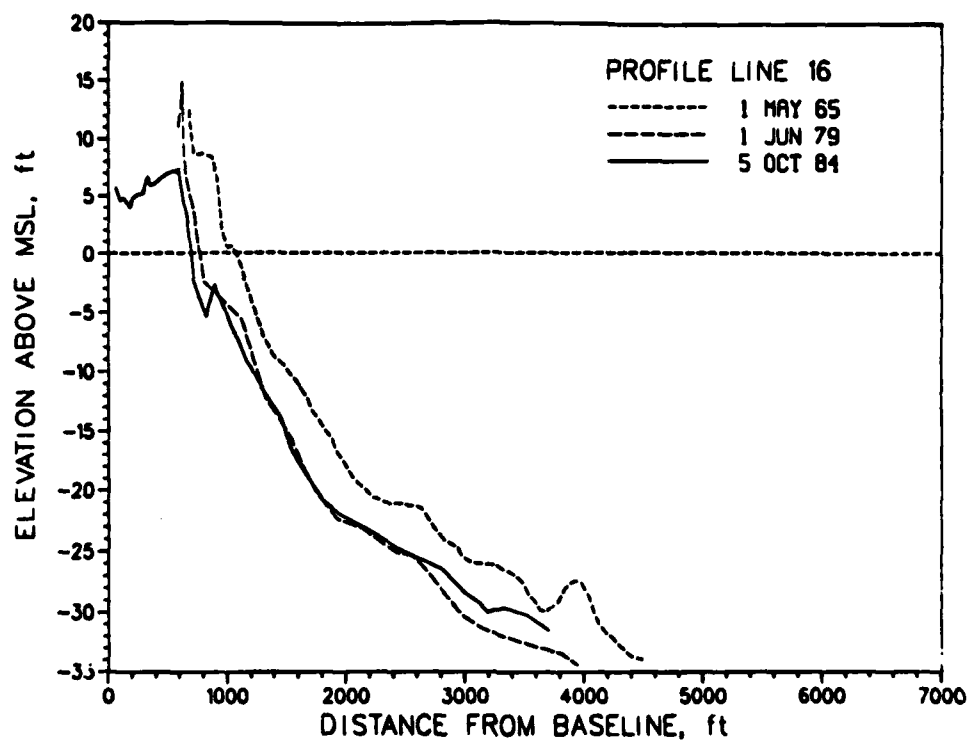


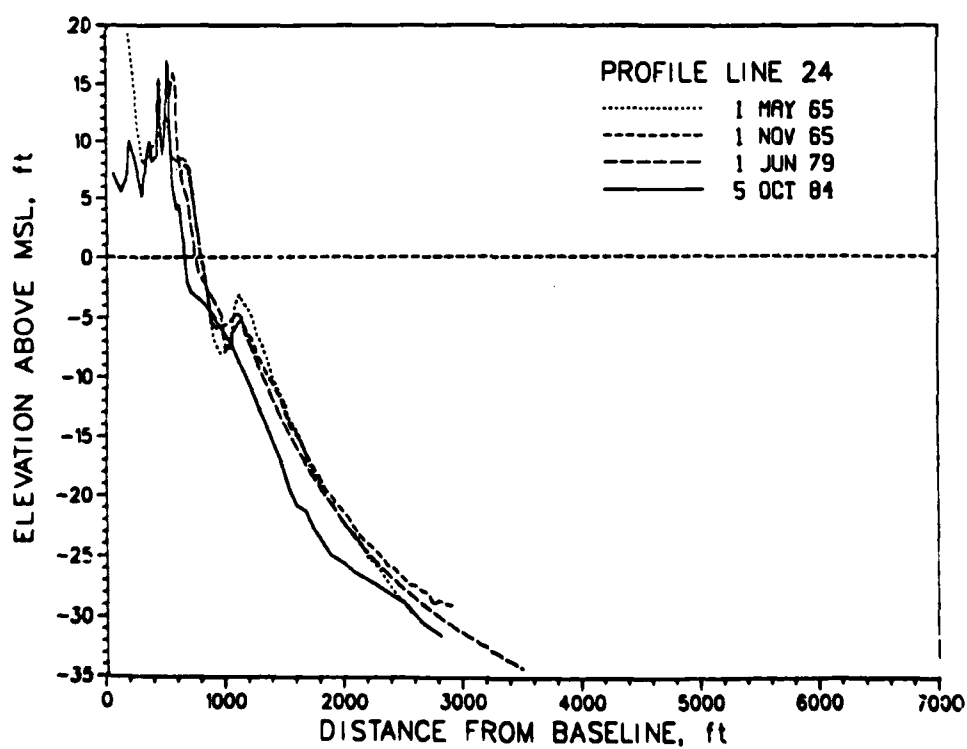
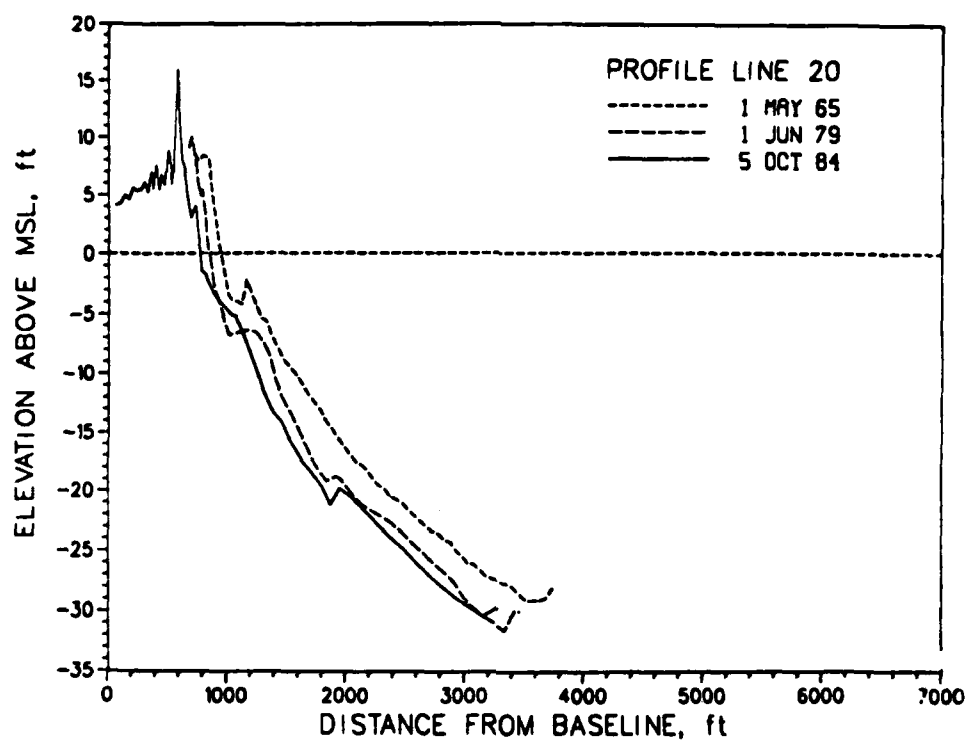


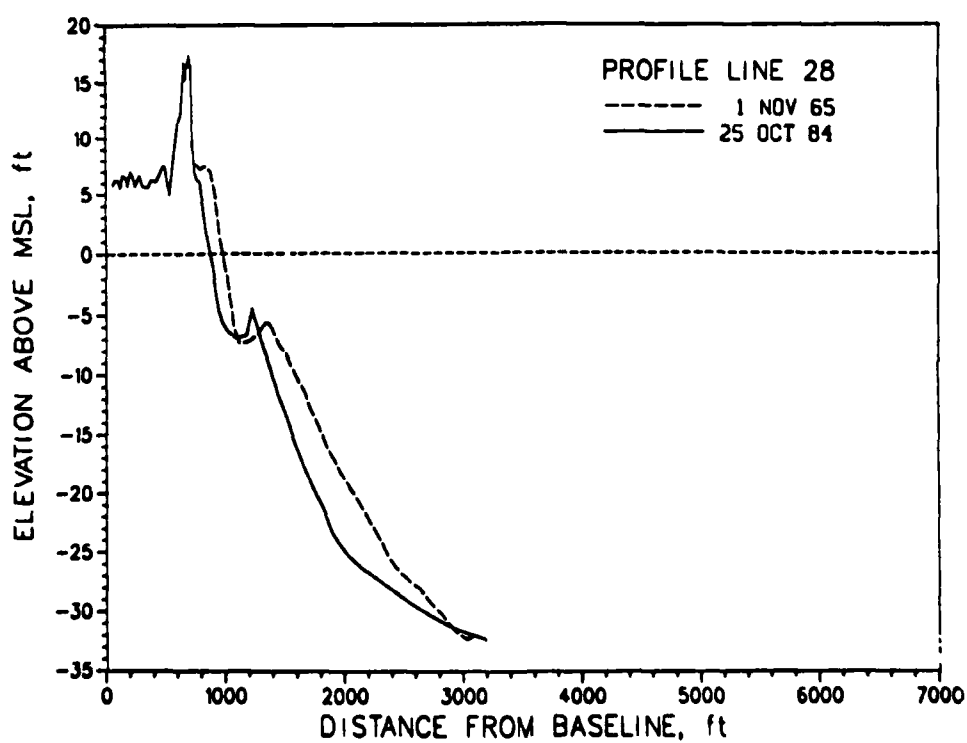
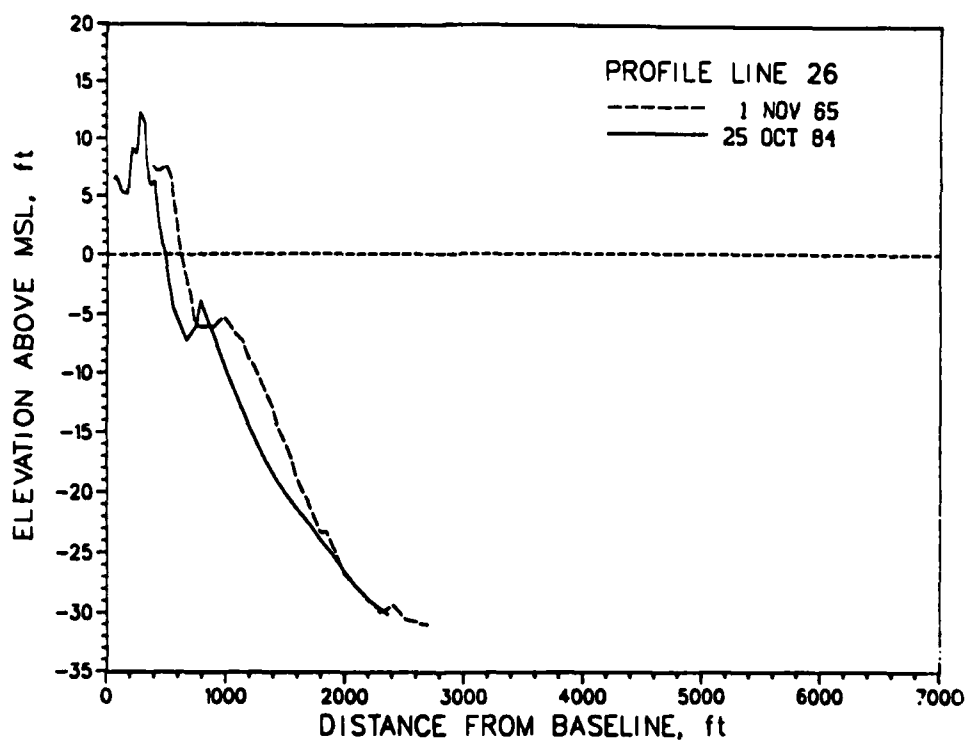


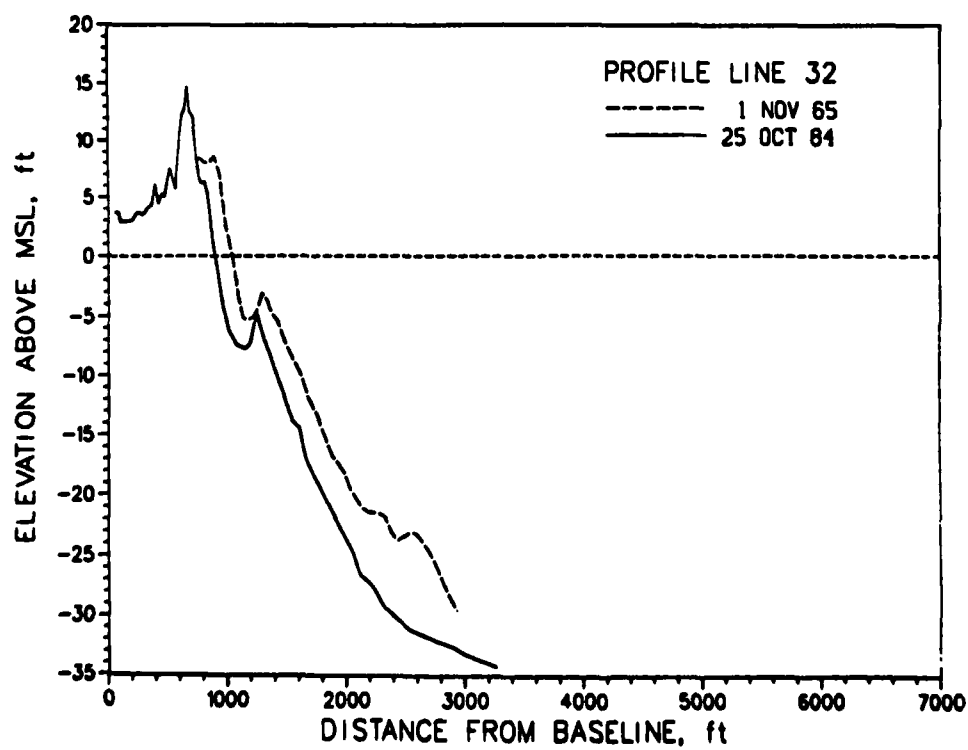
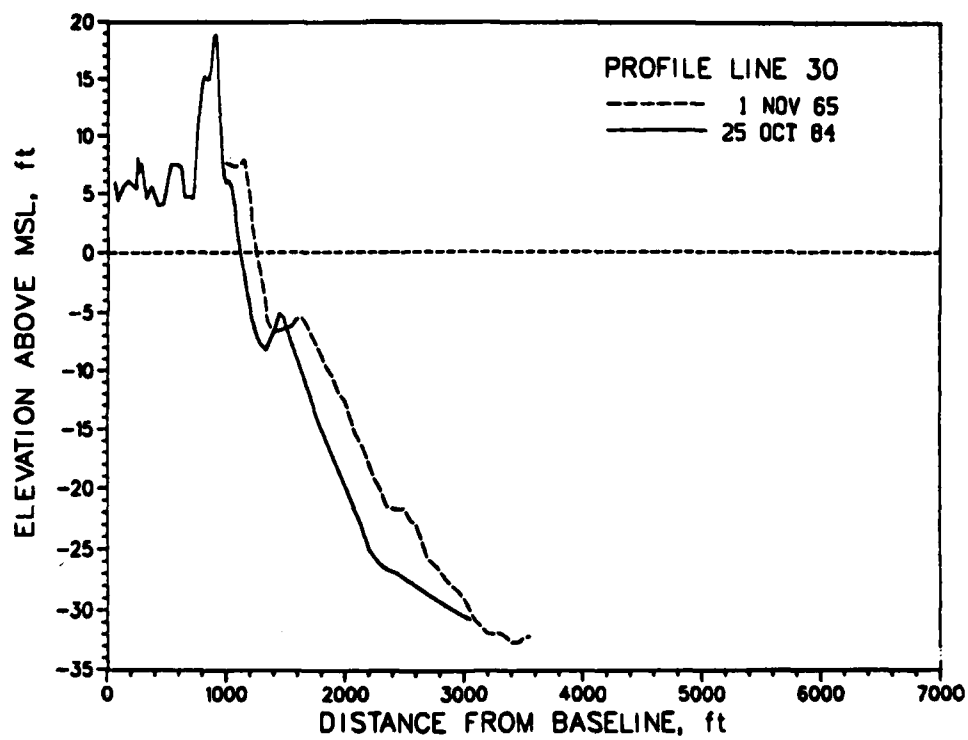












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